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PROGRESSIVE ARCHITECTURE

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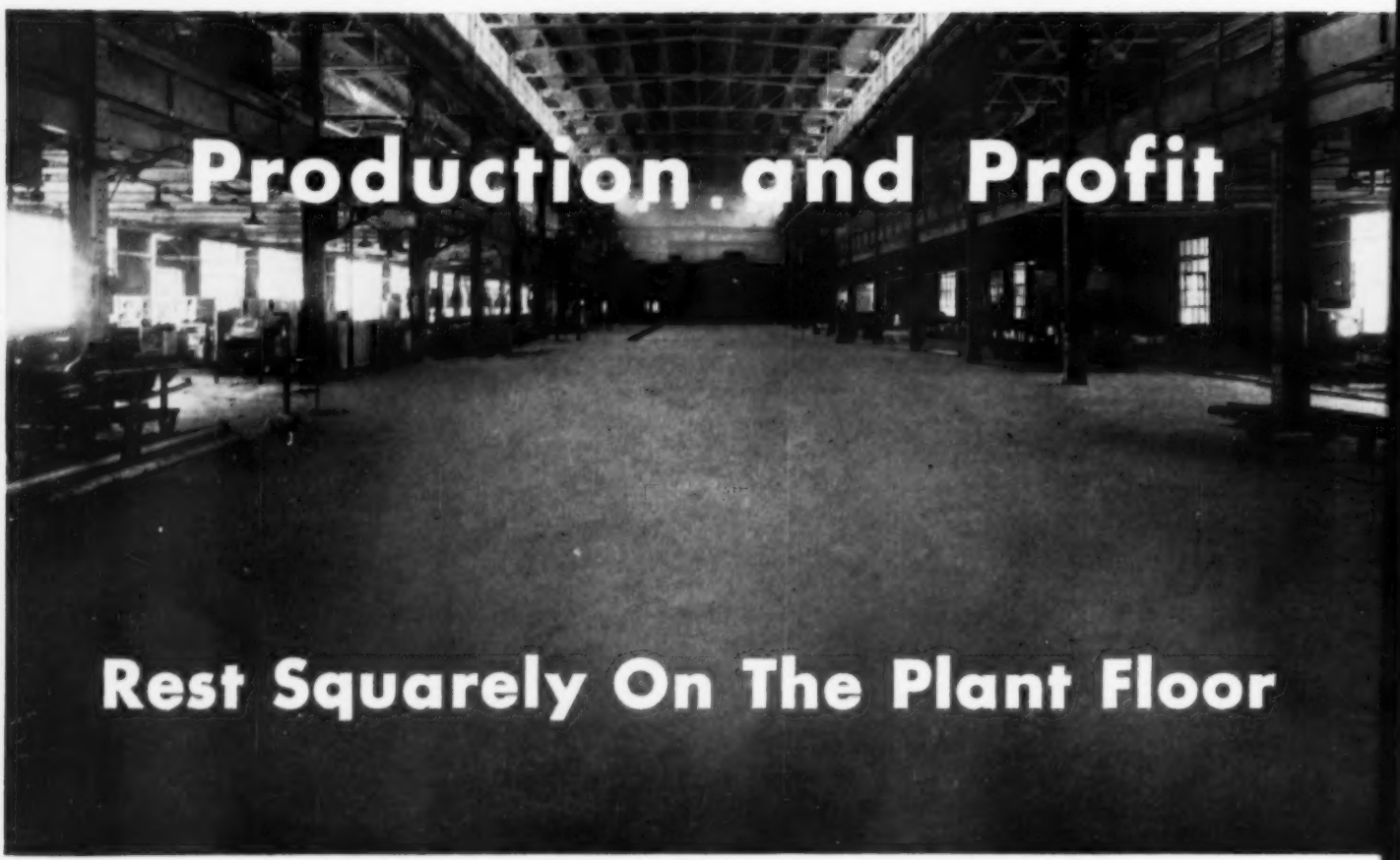

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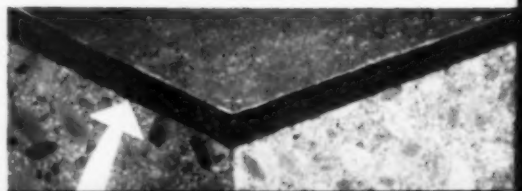

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pa newsletter

June 1953

A.I.A. Convention takes place this month in Seattle, Wash., with record attendance expected, and an interesting program scheduled. Delegates will receive copies of "A Guide to Seattle Architecture; 1850—1953," prepared and printed by Reinhold with the collaboration of the Seattle Chapter.

On the side of educational and professional activities in architecture, Convention should be able to map program based on final report of Burdell Commission, now about ready. On practical side, public relations program voted last year, now getting underway, will be topic of discussion. Contests for several offices, including Presidency, are anticipated. Sightseeing side trips are planned by most of the visitors.

First-quarter total construction amounted to $7003 millions, compared to $6594 millions last year in same period, according to government figures. Private construction rose 7%, public building only 1%. Commercial construction went up sharply compared to '52; hospital and institutional work, both private and public, dropped.

Anti-public housers in Congress have triumphed in having First Independent Offices Appropriation Bill for 1954 include no funds for new public housing, in version passed by House. However, President Eisenhower has indicated his feeling, according to reports, that present rate of appropriation should continue until a complete housing policy for his Administration has been evolved. Present guess is that small number, but some units will be started in fiscal year '53-'54.

FHA planning standards seems to have been forgotten in all the furor about mortgage rates. Many had hoped that new Administration would improve and co-ordinate present lax and inconsistent approach to approvals of site and unit planning, through advice from planners and architects. However, new Advisory Committee appointed by Commissioner Guy T. O. Hollyday is composed of four mortgage and insurance men and two builders.

Europe is using more light-gage steel construction since Marshall Plan aid has made possible construction of continuous strip mills, a U.S. observer reports. Prof. George Winter of Cornell U.'s Engineering School, on a speaking trip abroad, "encountered widespread interest in light-gage construction everywhere." Winter believes that in a few years most commercial as well as institutional structures in Europe will use light-gage, panel-type methods.

Jury has been announced for the International Exposition of Architecture to be held in conjunction with the Second Biennial of the Museum of Modern Art in Sao Paulo, Brazil; it includes Le Corbusier, Jose Luis Sert, Max Bill, Ernesto Rogers. Anyone can enter work completely or partially finished; details from the Secretary of the Biennial, Rua 7 de Abril, Sao Paulo, until July 15.

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newsletter

Readers of last month's special issue of P/A on airport design have been interested in status of government aid airport program, in light of budget economies instituted by the Administration. Situation is that of over 100 "tentatively programmed" federally-aided projects, all of which are being re-examined, 15 have now been finally approved, and others will be OK'd in short order. Status of the program for next year is still subject of Congressional debate, with bipartisan Senatorial group fighting hard for continuation of this vitally needed federal assistance to local governmental agencies.

Architectural League of New York has given its Friedsam Medal in Industrial Art to Arthur Amory Houghton, Jr., president of Steuben Glass, Inc. The League also announces award of Brunner Grant to Sibyl Moholy-Nagy to explore "Anonymous Architecture of the Western Hemisphere."

U.N. Buildings don't impress engineers as much as older Empire State Building. Voting on "seven engineering wonders" in New York area, Metropolitan Chapter of American Society of Civil Engineers named, first, two bridges—George Washington and Brooklyn—and then Empire State. U.N. Headquarters was a runner-up.

Two women students have been admitted to Cornell Chapter of Gargoyle, national honorary society in architecture, breaking long-established but unwritten restriction to male members only. Gargoyle was founded at Cornell in 1902.

N. Y. State Building Code Commission, successful in having its One- and Two-Family Dwellings Code adopted by 60 municipalities in the State, is now issuing a proposed Multiple Dwelling Code. Like the other, it is a performance code, and will be reviewed by thousands of interested individuals, societies, and groups before it is finally issued.

We used to measure the level of a nation's economic development, and the distribution of private wealth, by statistics on number of telephones, bathtubs, etc., owned, in relation to population. A new yardstick must now be considered. Admiral Corporation, manufacturer of TV sets, reports that a census shows 1,360,000 TV sets in operation in Chicago area—while only 1,260,000 bathtubs are in use in the area and 1,320,000 homes have telephones.

Are you planning to do a church job? You may not know that almost all denominations have "architectural advisors." Publicity on International Churchmen's Exposition discloses this fact, as the following are listed on its advisory committee as architectural advisors: E. F. Adcock, The Church of God; M. N. Berger, The Evangelical United Brethren; Alpin P. Bowes, The Church of the Nazarene; Forrest U. Groff, Church of the Brethren; U. P. Hovermale, The Evangelical United Brethren Church; William Vernon Middleton, The Methodist Church; and Charles J. Betts (the only one listed in the A.I.A. membership files), International Convention of the Disciples of Christ. One wonders what sort of "advice" these gentlemen give on architecture.

Readers of Dr. Carl Braestrup's articles in P/A on X-ray protection will be interested to learn that radiation experts of the Oak Ridge Institute of Nuclear Studies have OK'd the use of marble as a radiation-protection medium. A "tenth-value layer" (thickness which will reduce radiation to one-tenth its original value) is 4.25 inches, compared to .75 inches of lead, for a 660 kv radiation from cesium 137. Cost saving, where marble can be used, is obvious. One Mississippi hospital reports a $2700 credit for an alternate—4" of marble instead of 3/4" of lead—in two protected radiography rooms.

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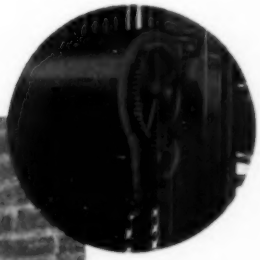

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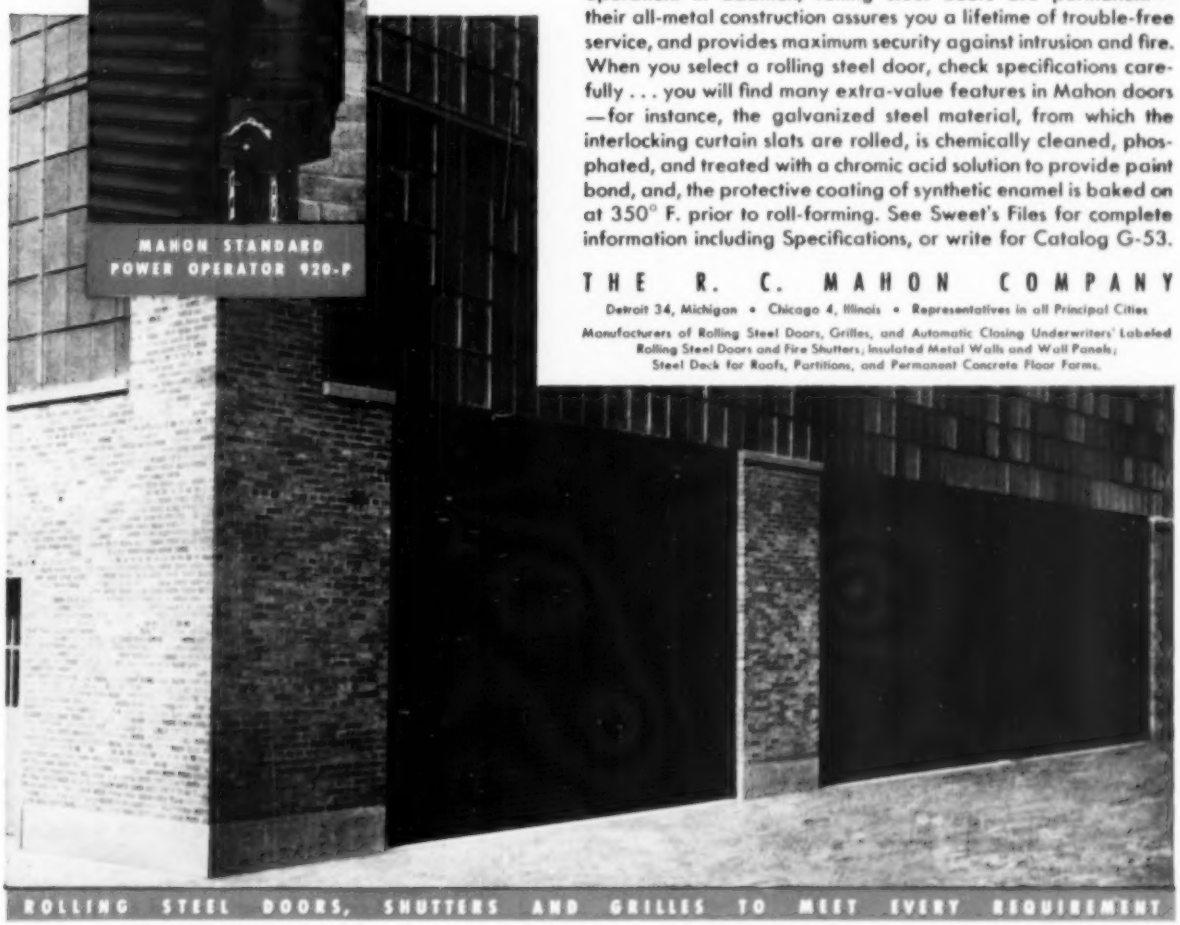

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In our role of the journal of professional opinion, we are happy to print reader comment on matters of interest to the architectural audience. This month, the letters comprising this section of P/A refer to controversies begun by other magazines but the Editors consider the reader responses below expressive of professional points of view that merit thoughtful consideration.

good politics: bad art

Dear Editor: The recent publication of criticisms of the United Nations Building in New York brings up the question of the method by which the building was designed. Secretary-General Trygve Lie appointed Wallace K. Harrison, one of the architects of Rockefeller Center, as chairman of the operations. Consulting architects from 10 countries and two engineers spent much time in evolving ideas for the building. The result does not seem to please a number of critically minded architects.

I venture to suggest that a collaboration of this kind is definitely a mistake artistically, although it may be quite the opposite politically. Frank Lloyd Wright could never collaborate on such a building and although Le Corbusier did, to a certain extent, he was far from satisfied with the result. The spirit of compromise, which is essential in governing bodies and international relations, does nothing but weaken a great architectural design.

The answer to this is, of course, the medieval buildings and great cathedrals of Western Europe. Conditions were different in those days and we hardly know how important the master foreman was. Also, in most cases, a cathedral would take a century or more to complete, with a resulting accumulation of styles. It is possible that we are going into another period of the type of collaboration commonly in use during medieval times. But we have not reached that point. We are still in the Renaissance mold, even if it is declining and we are not altogether aware of it. Without a dominating Michaelangelo, Christopher Wrenn, Mansart, or Bernini, the result is dull or commonplace. The recent pleasing (but not striking) dormitories by The Architects Collaborative, for the Graduate School at Harvard, are an example of the latter result.

I am writing this letter to point the direction in which we are going—more to warn than to condemn. It tends towards the monotonous and the uninteresting.

As an example, there are the recent business buildings of approximately 20 stories, which have been going up in New York since the war ended. At the moment there are about 10 of these in construction. Of the lot, Lever House, which is done in an extravagant way, rises above the dreadful, dull level. The rue de Rivoli is monotonous per block, but not per unit, and it is so placed between the Palace of the Louvre and the Palace de la Concorde that it is almost like the shaft of a column. Apparently we cannot have city planning in the manner of Haussmann, as yet, but we are not heading toward anything better, as we certainly should be nearly 100 years after him.

In conclusion: I am all for unbridled individual genius, if there is some around, rather than for well-trained teams who neutralize each others' efforts, no matter how socially improving they may be.

PHILIP L. GOODWIN
New York, N. Y.

•

threat or mare's-nest?

Dear Editor: The idea that foreign influence on our architecture and furniture constitutes a serious "Threat to the Next America" through some sinister dictatorship of taste seems to me preposterous (April 1953 *House Beautiful*). No one needs to live in an "International Style" glass house if he or she doesn't want to. Some people do! As a guest, I've lived in the most famous of them, the one at New Canaan, Connecticut. I can testify to the following facts: The glass house is no threat to privacy—all you have to do is to draw the curtains. There is no threat to the consumption and storage of consumer goods which so alarms Miss Gordon—I found more closet space in the New Canaan house than any house I know designed to accommodate one or two people. There is plenty of kitchen equipment and storage space, too, and all in a "living kitchen" which *House Beautiful* so much admires!

The charge that the architects of the International Style (or formerly of the Bauhaus or deStijl) are *today* designing with the primary goal of making their "furniture and buildings look like a Mondrian painting" is equally laughable. The five illustrations, which presumably illustrate this assertion, all date from *before* 1925 (pages 240-241). The two large illustrations of International Style houses both date from about 1930—and Miss Gordon fails to point out to her readers that they already demonstrated the reaction *against* cubist influence and toward classical regularity and symmetry, which set in about that time.

In this connection, it is amusing to study the house by John Yeon reproduced in the same issue of *House Beautiful*. There we see the glass walls first developed by the International Style (affording privacy at will, by means of curtains, just as in the case of the Mies van der Rohe house of 1930, used to illustrate Miss Gordon's tirade *House Beautiful*). And there are the chairs which closely resemble Bauhaus and Le Corbusier prototypes. Yeon's interiors, it is true, are enriched by antique Chinese (foreign!) and European (foreign!) furniture and rugs; but Mies's are enriched by handsome walls of warm-colored marble and macassar wood with pigskin-and-metal chairs of his own design.

Ironically, the founder of the Bauhaus, Walter Gropius, and his successor, Mies van der Rohe, came here from Germany *not* for racial or political reasons but because Hitler's chauvinistic tyranny put an end to their professional careers. Hitler denounced their work because it was modern, flat-roofed, international, *un*-German—and involved (he shrieked) with a conspiracy to undermine the good,

(Continued on page 10)

p/a views

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old, German way of life. Soviet authorities have followed suit.

This is still a free country. Some prefer a completely accommodating architect whose chief goals are comfort and *Gemuetlichkeit;* they are free to hire him. Others prefer an architect who will provide surroundings of a greater elegance of form, or consistency of style. If they hire him, they may have to make some concessions. Lewis Mumford tells a story about Frank Lloyd Wright (which incidentally involves Aalto, a Finnish International Style architect!) Wright, it is said, once turned upon a client—let's call him John Smith—who had added a few pleasant rugs and comfortable Aalto chairs to Wright's prescribed furnishings, and exclaimed, "You have ruined this place completely, and you have disgraced *me*. This is no longer a Frank Lloyd Wright house. It is a John Smith house now."

Now, Elizabeth Gordon's readers don't have to have a house by Frank Lloyd Wright (whom Miss Gordon seems to approve) nor by Mies van der Rohe (whom she disapproves). There is a great variety of modern architects to choose from, as the recent *Built in U. S. A.* exhibition at the Museum of Modern Art and the accompanying book amply demonstrated.

ALFRED H. BARR, JR.
Museum of Modern Art
New York, N. Y.

•

Dear Editor: I have read Elizabeth Gordon's editorial in April 1953 *House Beautiful* and also your open-letter reply. I agree with your reply except that I think the whole argument is rather pointless—unless the original editorial was written for advertising value.

The sentiments expressed in the editorial, with the exception of the political innuendos, are by no means new. For some time now, many architects and designers have been saying the same things—but fortunately not in the same way. We all know that "Good *Modern*"—I would rather say "Good Architecture"—combines the "best technical knowledge with sensitive understanding of people's requirements" and that it "creates houses that are beautiful to look at and wonderful to live in." Who will disagree with that? There have most certainly been violations of this principle and some pretty unreasonable things have been done by eminent modern architects. Frank Lloyd Wright can by no means be excluded. In fact, I wonder who can.

I have no fight with Miss Gordon's remarks about modern furniture. It is, for the most part, uncomfortable—but no more uncomfortable than the stuff that filled every furniture store 15 years ago. Yet the uncomfortable modern furniture is, for the most part, easier on the eyes. If architecture "had to go through, in its early phases, a simplifying, cleaning-up period in order to clear the air and begin

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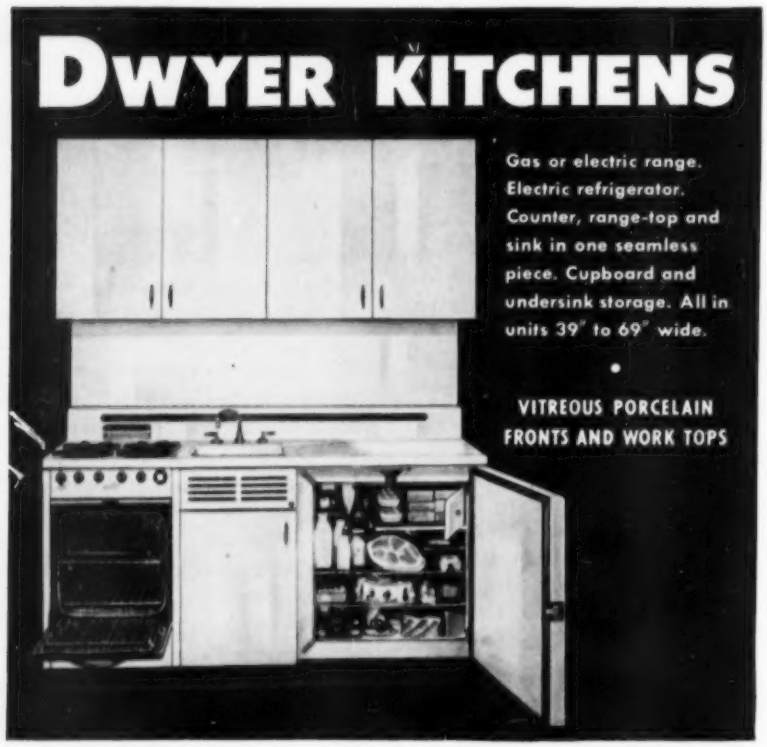
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p/a views

(Continued from page 10)

afresh"—so has furniture design. All of this experimentation is leading gradually to something better, richer, warmer, and more comfortable. It is no secret that designers are realizing that the body cannot fit into a mold—no matter how perfect a fit—and be comfortable for long. Miss Gordon picked a particularly bad example, by mentioning Frank Lloyd Wright and a chair in the same paragraph. If there was ever an example of "hair shirtism," it is the angular, hard, uncomfortable homegrown chairs that fill his houses.

The Bauhaus is history. In its day it did a bit of clarifying and served a great need in Post-World War I Germany. It has also stimulated and influenced designers in America. I doubt if Walter Gropius thinks that pure abstract design is the fullest measure and highest achievement in architecture. Why make a controversy over something nearly dead? The two recent examples of Mies mentioned in the editorial are the tombstones to prove it. However, it is fallacious to say that the "homegrown variety of modern design has developed slowly and steadily" without outside influence. Architecture *is* developing, so why not let it continue unimpeded by such trumped-up controversy? American architecture has gained much from LeCorbusier, Gropius, Frank Lloyd Wright, and others—but that doesn't mean we are to stop right there.

I hope that this does not develop into a campaign of looking for skeletons and jousting with ghosts. Miss Gordon is impatient. She must realize, however, that even though we live in the fastest moving age, so far, we will not wake up next month and find ourselves in the "Next America" with everything perfect. What is all this "Next America" stuff, anyway? Editorialism? It would seem far better to make the most of today, instead of waiting until the "Next America."

Rather than clarifying anything, an issue is being made of things which do not actually exist and the lay public will be even *more* confused. There is much development to be done. Life is continual change and architects are incessantly striving for improvement in technique and design, and for beauty and comfort. Eliel Saarinen, when asked which of his buildings he considered his best, once replied, "My next one."

The real threat to America is not cultural dictatorship—but dissension and division.

HUGH STUBBINS, JR.
Lexington, Mass.

•

Dear Editor: I feel all of this must be terribly embarrassing for Yeon and Wormley who are really very good designers. I can't imagine anybody wanting to have their work published in her magazine while this hate campaign is going on. Elizabeth Gordon is hurting herself the most, in the long run; which reminds me of an old New England poem. "Lizzie Borden took an axe and gave her mother 40 whacks, when she saw what she had done, she gave her father 41."

EERO SAARINEN
Bloomfield Hills, Mich.

(Continued on page 170)

is your venting knowledge up to date?

For too long the belief has persisted that any type of passage-way to the outside is adequate for venting gas appliances. Such concepts have resulted in erroneous, and sometimes dangerous, venting practices such as those illustrated above. They have resulted in homeowner complaints due to overheated walls, musty, stale-smelling air and damage to walls and furnishings—largely caused by uninsulated vents improperly installed.

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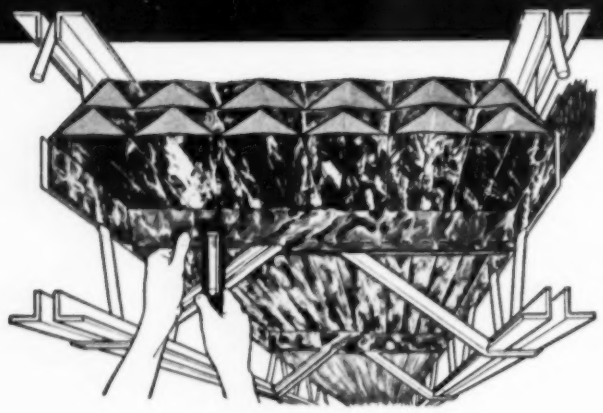

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It is hard to keep these buildings warm in winter and cool in summer. Condensation sometimes forms, drips, causes damage. The problem is often solved by insulating with three tough, never-touching sheets of aluminum compartmented by two fiber partitions.

Steel beams are good conductors, extract much heat from the surrounding atmosphere, which causes a dew-point to be reached with resulting condensation. They need insulation against heat and vapor flow. Multiple accordion aluminum sheets are virtually non-condensation-forming, retain no moisture, have zero vapor permeability. Their heat emissivity on the cold side is 3%.

Contrast this with the necessity of heating-up tons of steel beams and ordinary insulation, sometimes wet, which wastefully radiate heat at a 90% rate on the cold side. In summer, iron and steel beams, ordinary insulations, and most building materials, often continue to radiate uncomfortable heat into a room long after the outside air has cooled.

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resort hotel south of the border

Construction is expected to start later this year on the resort hotel (*rendering below*) designed by Kemper Nomland, Los Angeles architect, for a syndicate of Mexican businessmen. The site is near the western limits of Mexico, D. F., close to a golf club, the "Hipodromo de las Americas", and the Lomas Reforma boulevard, in an area now being actively developed.

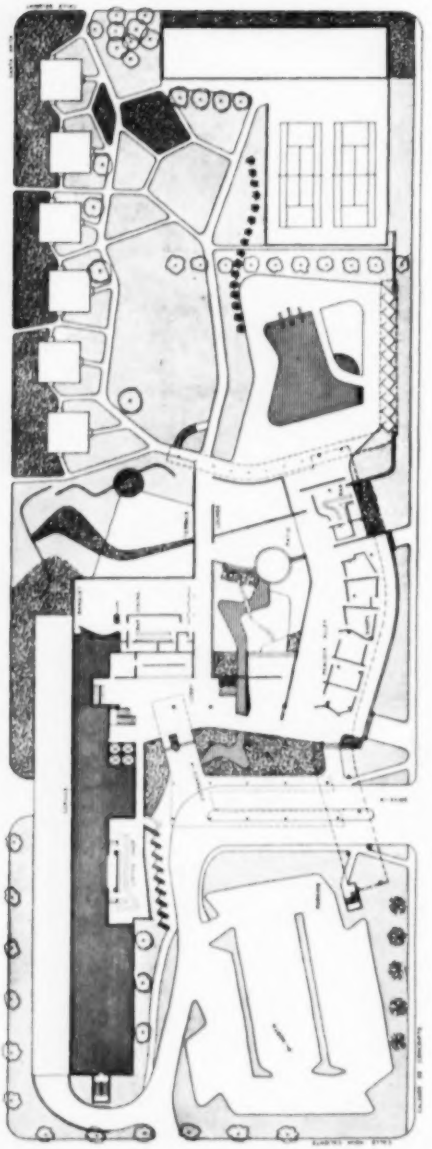
More than 300 guest rooms, each with private balcony, will be provided in the eight-story main building and over the luxury shops located in the curved wing at the front. The latter guest rooms are intended as the deluxe group, as the irregular contour will permit varied exposures and views. In addition, the syndicate contemplates private cottages at the side of the main building.

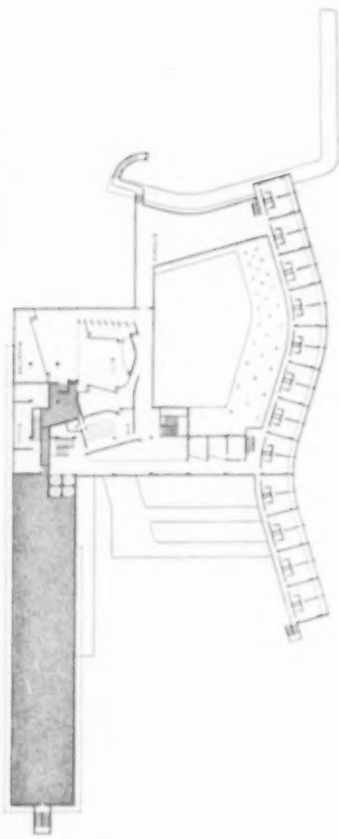
The main lobby will be located in the gallery connecting the curved wing and main building. The second connecting element, across a landscaped patio, will contain the main lounge, overlooking the

swimming pool and tennis and fronton courts beyond (*see plan of main floor*). Adjacent to the main building and opening from the lobby will be the dining and banquet rooms, with a bar, club room, and ballroom on the level above. Access to the sun deck over the lounge is from the bar and the club room. Moving stairways will connect public spaces on two levels.

Structurally, the main building is designed for a two-column reinforced-concrete system, with floor and roof slabs cantilevered on both sides. Every second bay will have a structural cross partition, or shear wall, to withstand seismic shock. The buildings are to be finished with local stone and the roofs will be finished with tile, for use as decks. The roof of the main building could be used for helicopter landing, the architect points out.

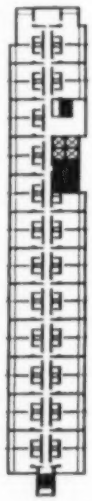
Decorative stone will be freely used and murals and sculpture will be favored for adornment of the public spaces. Extensive landscaping is indicated on the plot plan, uniting the hotel with the cottages and recreation facilities.





Second floor

Typical floor



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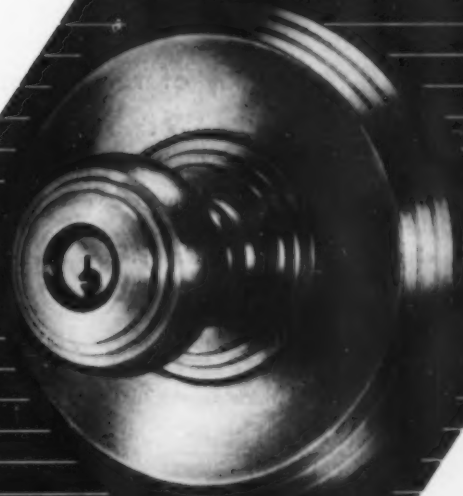

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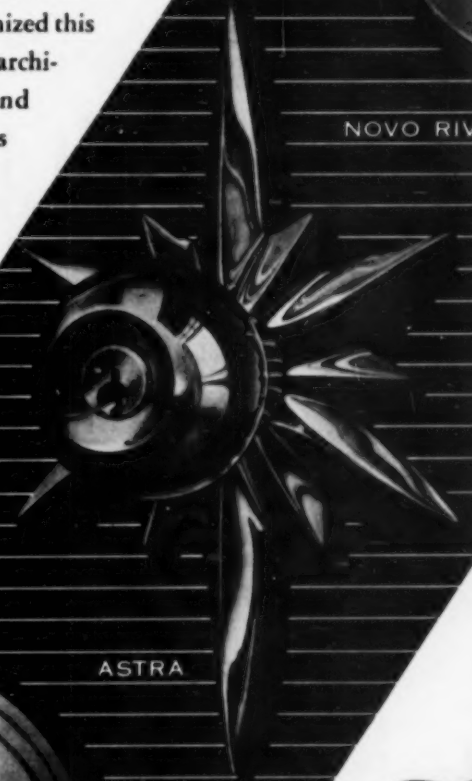

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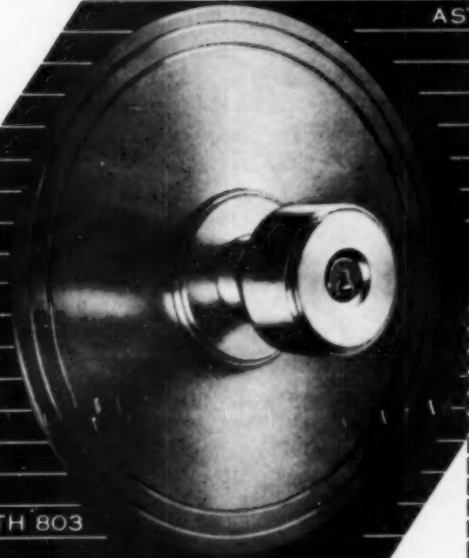

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the fallacy of totalitarian architecture

by Aladar Olgyay

An architectural style is a projection of the period in which it was created. Ever-changing life molds architectural expressions according to its specific needs. Changes are dictated not only by the use of new materials and construction methods, but even more by a deeper decisive factor which is spiritual. Architectural expressions are created after the aims and the ideals of the period. Architectural styles (or the expression of life in architectural forms) are typical of the time and of the people who created them. If we look at them with open eyes, we can see behind the forms, the trend of the time.

Living in a period, we might not be aware of the fact that we work, act, or design in a certain style. We don't think of it, because what we create is the natural and sincere expression of our feelings. (What an English scientist once said seems very true: "the last thing a deep-sea fish will discover—is water.").

As is well known, the period of greatest achievement for modern architects in Germany was between 1925 and 1933. In those years, Germany was proud to be the center of a new culture more lively and promising than Europe had seen for 150 years. It was part of an international movement, which spread throughout the world and which is now in full bloom in every progressive country. But in Germany this was crushed. The rise of Nazism brought this period to an end.

When I was in Berlin, in 1938, I looked with amazement at the reactionary turn which was demonstrated at an exhibition. Hitler, as he opened his First National Exhibition of Architecture and Crafts, said:

"This exhibition . . . represents the beginning of a new era. For the first time since the building of our cathedrals, we see here a truly great architecture, which is not an architecture using itself up in service of petty everyday commissions and needs, but an architecture reaching far beyond everyday needs." ——and he continued—— "We can claim for it that it will stand up to the examination of thousands of years to come and remain the pride of the people that created it."

We know today that this latter sentence was not good prophecy. But let us discuss the first sentence. He was right: the leading architects up to that time had studied more carefully the problems of human beings in every-day life than the monumentality of the buildings. They had studied functions, minimum living space, low-cost housing. All their research was based on the human scale: on the measures of the human body. We might call that a democratic architecture, because its aim had been to serve the human individual.

However, the Nazis wanted impressive and monumental architecture which would express the glorification of the state. They turned to the Neo-Greek and Neo-Roman styles. What strikes one is not the forms, with their simplified elements, but the uniformity of the build-

(Continued on page 20)

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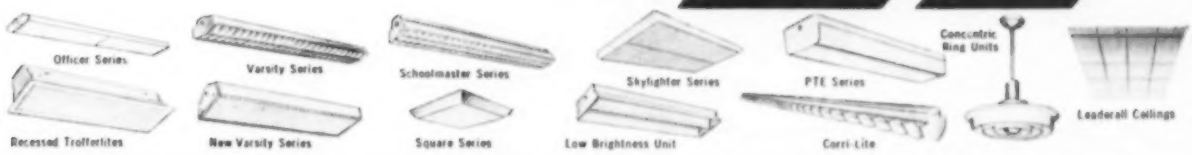

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totalitarian fallacy

(Continued from page 18)

ings and their immense scale. For sheer bigness is a quality of outstanding importance in influencing people's judgment of architecture, especially, that of the masses. Discrimination between bigness and greatness requires a certain education which the masses generally do not possess. They are impressed, and that is the goal.

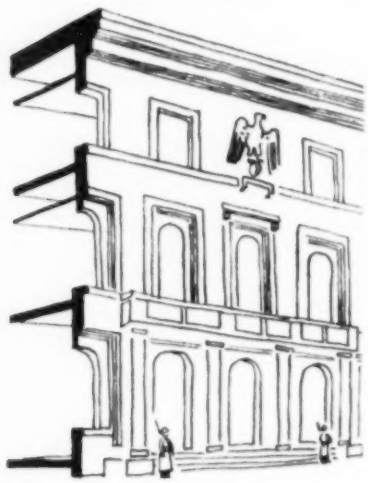
•

A typical example of this megalomania was the Memorial Hall, which was designed in the center of a vast group of new buildings in Berlin by Architect Wilhelm Kreis for the Supreme Command of the German Army. This hall was 600 feet in length and 180 feet in height.

A few examples will reveal the insincerity and falseness of this architectural monumentality, not only from the ideological but also from the functional points of view.

The most ambitious plan was the transformation of Berlin by Architect Albert Speer, on an imposing scale to become the fitting Capitol of the Third Reich. Two main avenues were planned to cross each other through the city: the North-South and the East-West axes The famous trees of the old "Unter den Linden", which was used as a part of this project, were replaced by swastika standards. These axis-roads were not intended to be streets in the ordinary meaning, where human beings were to stroll. They were designed for well-trained and victorious marching troops. The width of these avenues varied, but in some places they were 700 feet wide.

The relation between the width of the street and the height of the buildings was carefully studied. Often, to study the effect, life-size models were made of wood and gypsum, painted in various marble colors. The result of the monstrous width, according to their academical esthetic rules, was that they had to raise the ceiling heights to 24 feet in the buildings! This is an extraordinary height for ordinary rooms. This measure might have been apt for some meeting places, but it was impossible to fill all those miles of buildings with conference halls. There was need for secretariats, corridors—and for washrooms.



To avoid the well-like appearance of these smaller spaces, and to be able to heat them, a false ceiling had to be hung from the floors above. This meant that

(Continued on page 178)

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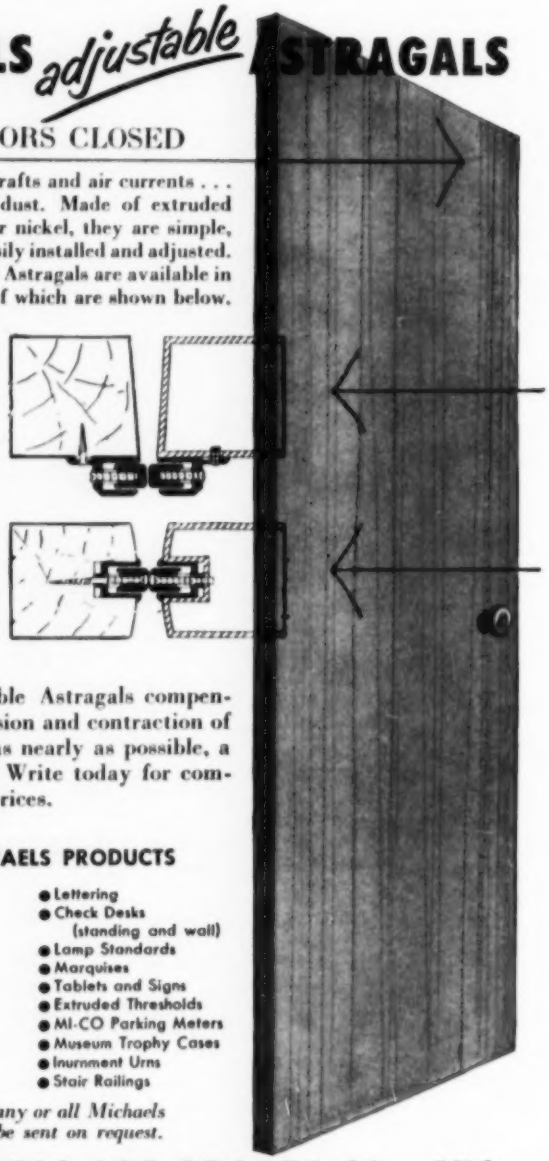

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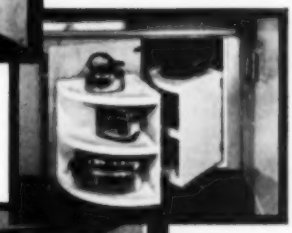
The new Curtis Tray Units are available in 9 widths with double doors in 24" and over. Suitable for linen or pan storage. All trays dadoed for dividers.



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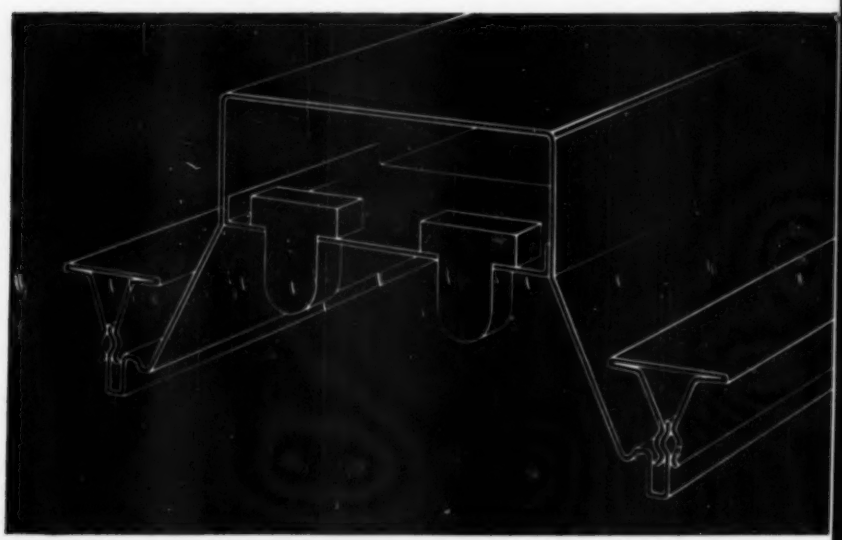

Ceiling design

can dictate the lighting system

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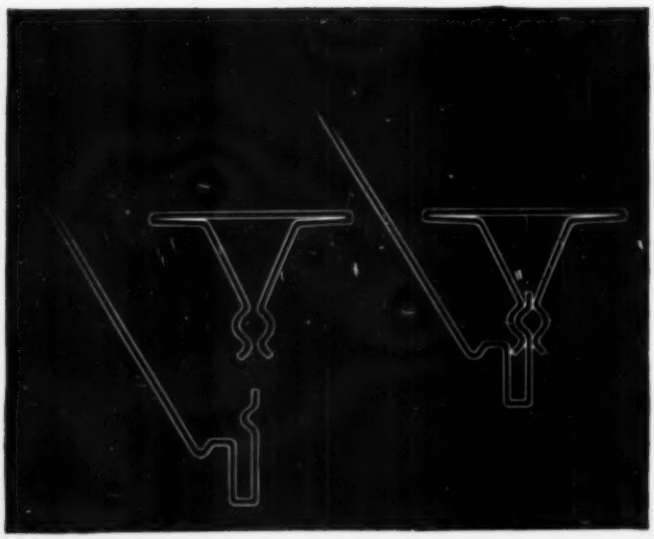

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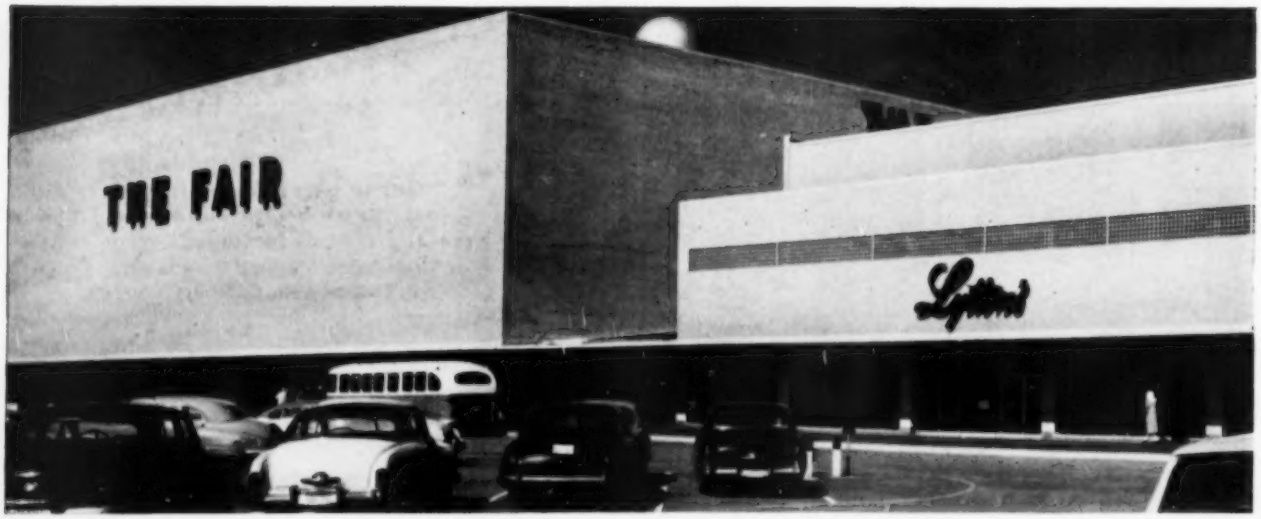
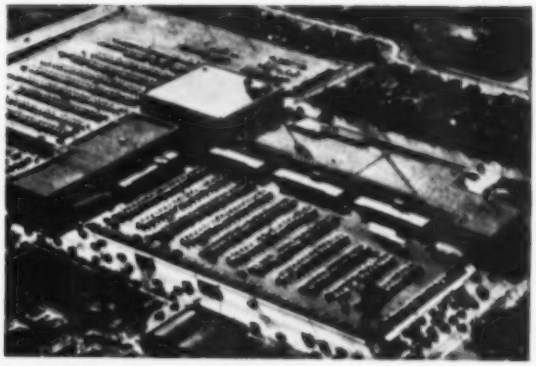


Most of the smaller shops above have individual Honeywell thermostats. By adjusting these individual thermostats, store managers can provide the temperature employees and customers find most comfortable. Smokestack identifies project's central steam plant—controlled for most economical operation by Honeywell boiler room controls.

One or more thermostats on each floor of the larger stores below provides zoned comfort. Thus, in winter the first floor thermostat calls for heat required to compensate for cold air entering doorways, keeps first floor at same *comfort* level as other floors. Thermostats on other floors compensate for different occupancy, exposure and use problems found there.



Evergreen Plaza center was created by Arthur Rubloff, Arthur Rubloff & Co., Chicago; Howard T. Fisher & Associates, Inc., Architects & Engineers; Holabird & Root & Burgee, Architect-Engineer; George A. Fuller Company, Builders.

For comfortable, even temperature in new or existing buildings – of any size – use Honeywell Customized Temperature Control

Whether it's a shopping center, apartment, church, school, office, factory, hospital, garage—or any size building—new or existing, Honeywell Customized Temperature Control can help meet your clients' heating, ventilating, air conditioning and industrial control problems.

Once equipped with Honeywell Customized Temperature Control, they'll have an ideal indoor "climate"—and save fuel besides.

And with a complete line of pneumatic, electric and electronic controls to choose from, Honeywell Customized Temperature Control offers you the greatest flexibility in design. Then, too, when it comes to performance, Honeywell-built controls assure years of trouble-free operation. And they're backed by the finest service organization in the controls industry.

For full facts on Honeywell Customized Temperature Control, call your local Honeywell office. There are 104 across the nation. Or mail the coupon today.

Willard A. Brown, Rubloff's project managing director, says: "We have a great many different temperature control problems here at Evergreen Plaza. Honeywell handles them all extremely well. Fuel consumption is low, too."

MINNEAPOLIS
Honeywell

First in Controls

MINNEAPOLIS-HONEYWELL REGULATOR CO.
Dept. PA-6-122, Minneapolis 8, Minnesota

Gentlemen: I'm interested in learning more about Honeywell Customized Temperature Control.

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As fundamental as hidden pipes...

A good plan is always better when it includes symbols for telephone outlets.

In the home-planner's scheme of things, the place for pipes is in the walls where they're out of sight.

That's the accepted place for telephone wires, too.

You can make concealed telephone wiring and preplanned telephone outlets standard features in the homes you design. A simple conduit system, included in plans and specifications, is all that is required.

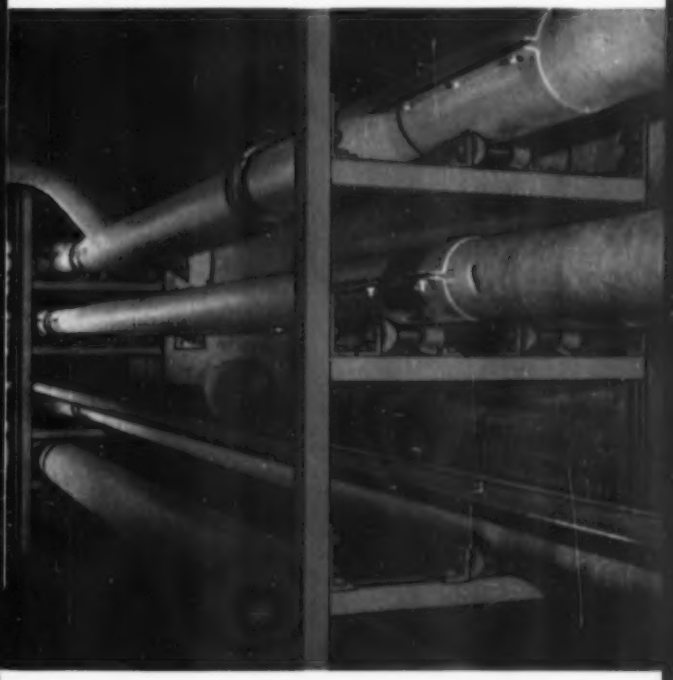
Your Bell Telephone Company will be glad to help you plan economical raceway installations. Just call your nearest Business Office.

BELL TELEPHONE SYSTEM

install piping runs with Versatile UNISTRUT®

METAL FRAMING

The modern way to rack piping

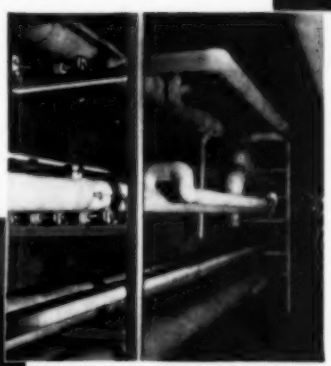


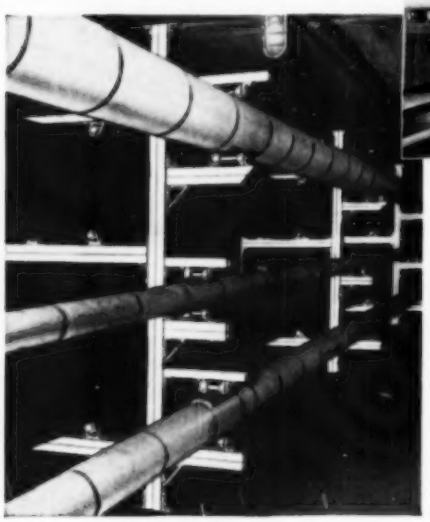
Tunnel job showing how UNISTRUT continuous run concrete inserts can be installed vertically or horizontally, or at any angle required.

UNISTRUT Products are Bonderized

Typical piping installation supported by UNISTRUT framing, concrete inserts and roller pipe supports. Slotted channel permits attachment of fittings at any desired point.

Note how UNISTRUT framework's great strength easily supports long runs of heavy piping, including bulky 16" chilled water lines.





Adjustable Framing System

assures exact pitch, permits changes or additions at any time—no special tools or equipment needed.

Conserves Steel, Reduces Manpower Hours, Cuts Over-all Costs

The UNISTRUT system of mechanical supports includes steel channel, roller pipe supports, concrete inserts, brackets, clamps, pipe hangers and many other standard parts which combine to form the world's most flexible system of support or suspension.

You save time in engineering detailing and eliminate the need for trained erection crews—you get fast, on-the-job framing assembly where adjustments are made and supporting members added as the work progresses. Try it on your next piping job!

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The World's Most Flexible All-Purpose Metal Framing

For the Man on the Job!

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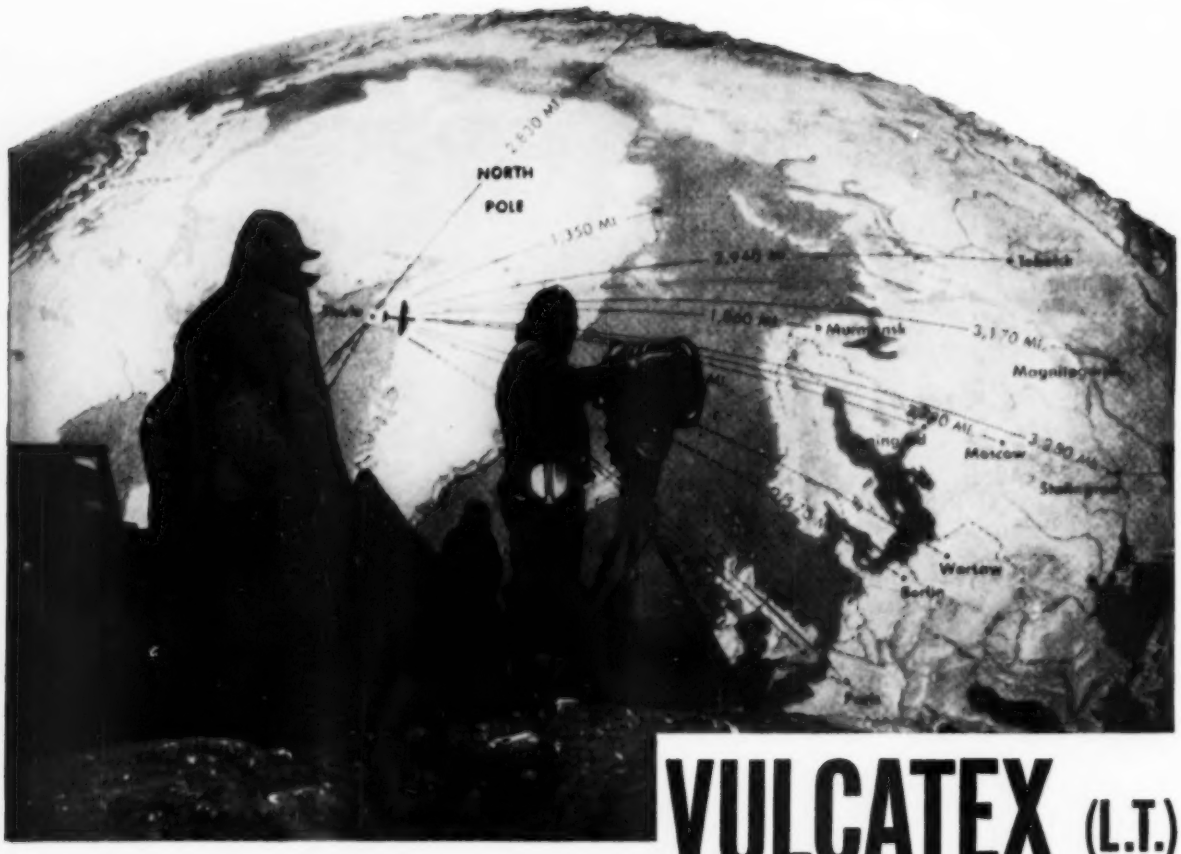
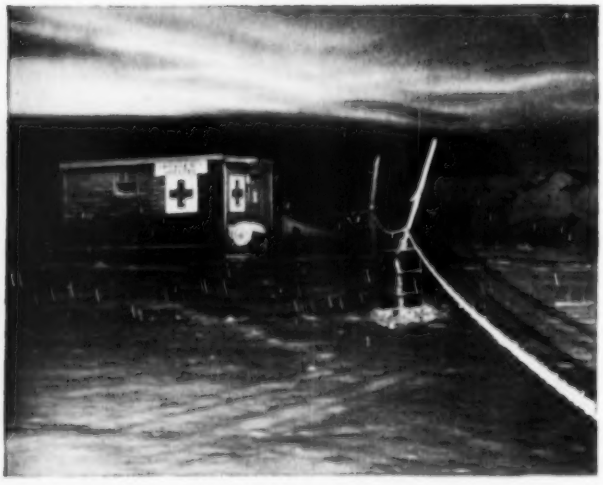


VULCATEX (L.T.)

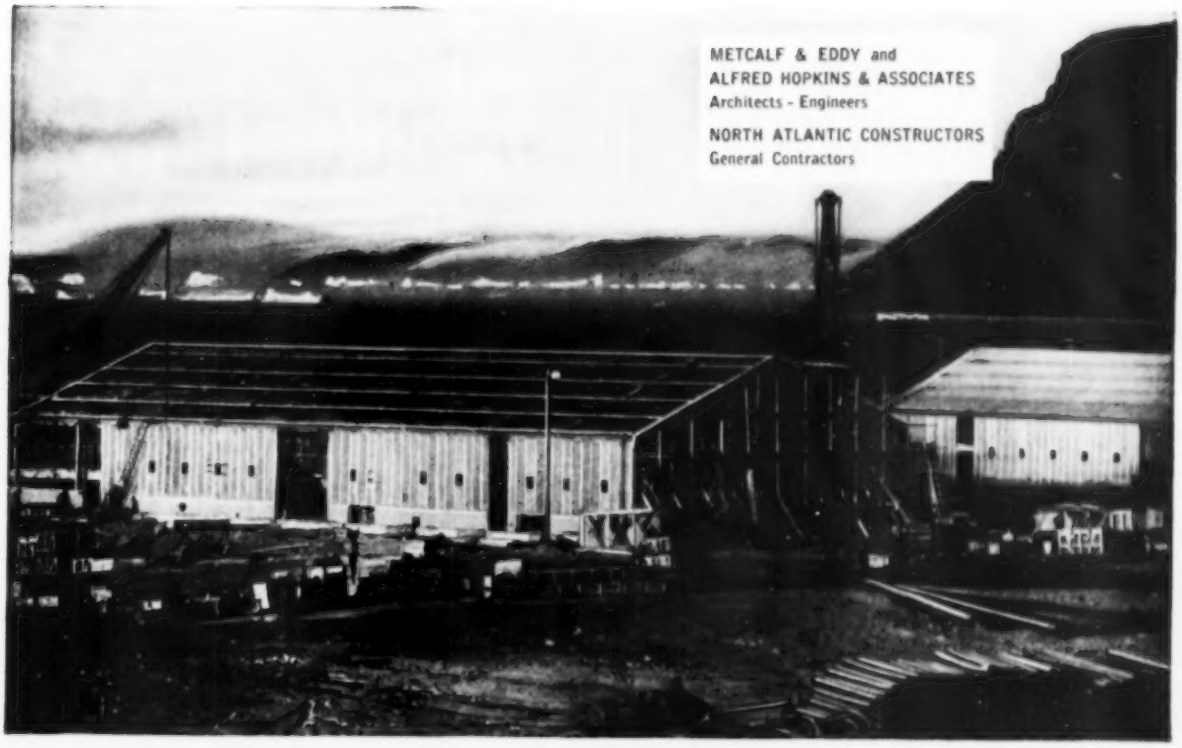
OUT COLD ON OPERATION 60 DEGREES BELOW ZERO



Through the announcement of the Defense department the public now knows about operation "Blue Jay" only 900 miles from the North Pole. This modern engineering miracle is a full scale year round bomber base. Temperatures of minus 60° F are common and winds drive rain or snow against the structures at 150 miles per hour. In such cold even rubber and steel become brittle.

The A. C. Horn Company Inc. has the honor of having supplied over 40,000 gallons of its special low temperature Vulcatex Elastic Caulking Compound. This was used in the joints and between the panels of the many pre-fabricated structures for water-tight, air-tight seals.

Operation "Blue Jay" in spite of the inhuman cold is now described



CAULKING COMPOUND KEEPS "BLUE JAY," GREENLAND, AT

as "Snug" and the workers and service men enjoy better than normal health. Vulcatex (L.T.) Caulking Compound keeps the heat in and the fierce cold out. Thousands of other important buildings in the United States and throughout the world are also protected by Vulcatex in every climate and type of structure.

Vulcatex, a product of the Horn Research Laboratories, has outstanding properties of plasticity, adhesion and long life. Many applications over 20 years old are still completely effective. You can rely on the performance of any Horn product. This has been true for 56 years.

A. C. HORN COMPANY, INC.,
Long Island City 1, N. Y.

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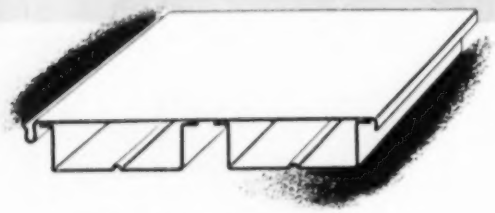
Announcing new additions to the money-saving family of Fenestra Building Panels!

Here's a whole new line of modern architectural "tools"—the latest advancement in the field of light-gage steel construction.

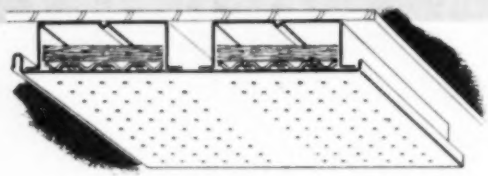
Each one of these new Fenestra* Metal Building Panels is a multi-purpose package—structural and finish material. Each is long-span, steel-strong and lightweight, saving building time, money, labor and materials.

Fenestra Engineers are ready to give you thoroughly tested data on all of these products. Please call your local Fenestra Representative or write direct to the Detroit Steel Products Company, PA-6, 3409 Griffin St., Detroit 11, Michigan. *Trademark



Fenestra's New "D" Panels for Floor, Ceiling, Roof

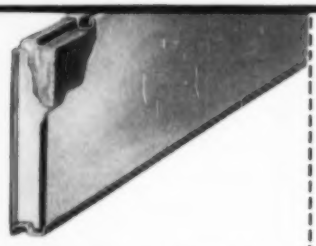
These rugged, rigid, long-span metal panels interlock quickly and easily to form subfloor, or combination ceiling and roof. They are easily arc welded to supporting structural steel. Wires, etc., can be run conveniently through the box beams. Large pipes and ducts can go between the cells. Panels are 24 inches wide, 1½ inches deep, up to 33 feet long.



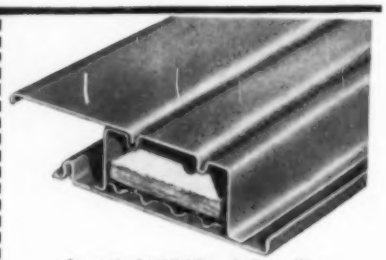
Fenestra's New "D" Panel Acoustical Ceiling

These panels are available with the flat, smooth side of the box beams perforated and with sound insulation material inside the box beam. Placed flat side down, the panels interlock to give you a beautiful finished ceiling. It's structural material and finished ceiling *in one* compact package. Fire-safe, maintenance-free. Same dimensions as "D" Panels for floors.

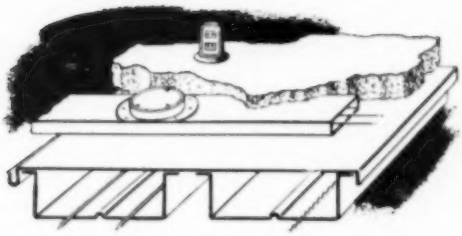
Add the new panel products, shown above, to this old, established family. Here is real latitude for architectural design.



"C" Insulated Wall Panels. Width 16". Depth is 3", installed horizontally or vertically.

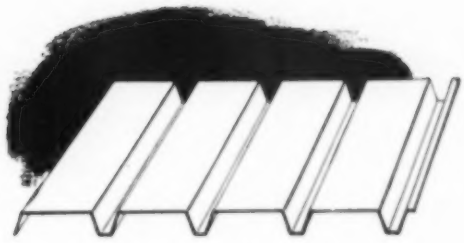


Acoustical "AD" Panels for ceiling-silencer-roof. Width 16". Depths to 7½".



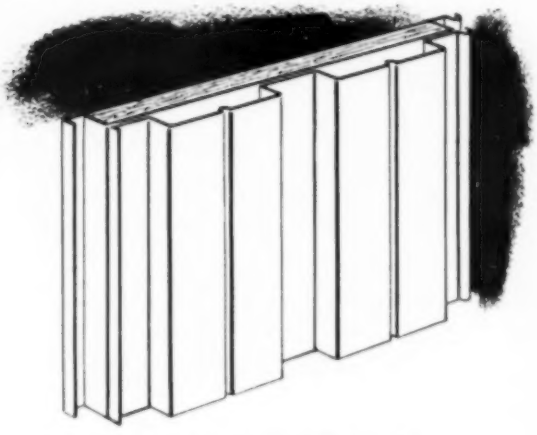
New Fenestra-Nepco "D" Panel Electrifloor

Here is almost unlimited electrical availability for the life of a building. Panel cells are 12″ on center, a 27″ duct area for the 3″-deep panel. This is adequate for all cables, including coaxial. And for a two-duct system, outlets can be spaced 6″ apart.



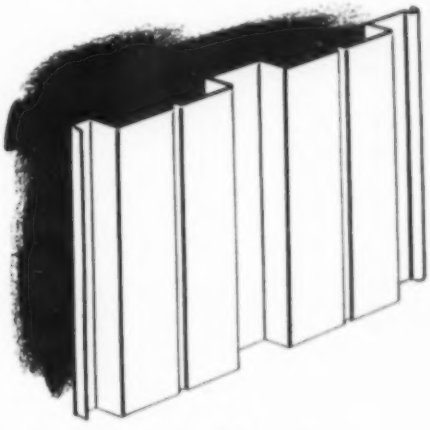
New Fenestra Econorib for Roofs

Here is 18 and 20 gage, 1½″ deep roof deck with a full ½″ rib base for purlin contact when you weld the deck down. 24 inches wide for economy of handling and for increased strength. This balanced design combines economy and strength to the "nth" degree.



Fenestra's New Fluted Wall Panels

These 24″-wide insulated wall panels are available in galvanized steel, painted steel, aluminum or stainless steel—in lengths required by job conditions. The double 1½″-deep hat sections have stiffening ribs for great strength and good architectural effect. Interlocking, telescoping ends, eliminate intermediate flashings. Insulated with 1½″-thick glass fiber for a better U value than a 16″-thick brick wall! Quickly installed inside-outside finished wall in one package.

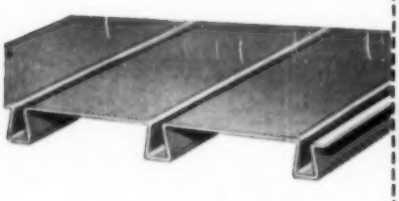


Fenestra's New Uninsulated Siding

An architecturally attractive, economical siding for use where high insulating value is not necessary. Available in 18 gage steel or 16 gage B&S aluminum. Quickly, easily installed. Fire-safe. 24 inches wide, 1½″ deep.

Be sure to see the Fenestra exhibit at the A.I.A. Convention in Seattle, June 16-19

Fenestra
METAL BUILDING PANELS



Holorib Roof Deck. 18″ wide—depth 1½″—lengths up to 24′.

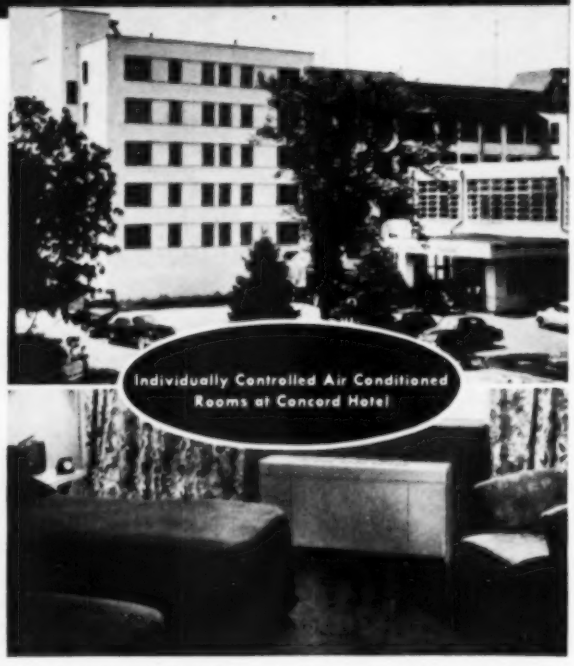
Acoustical Holorib for acoustical-structural roof. Width 18″. Depth 1½″.

Holorib Reinforcing Floor Forms. 18″ wide—lengths up to 24′. Upturned pyramidal ribs reinforce concrete slab.

Another interesting REMOTAIRE installation!

Individual-room remote type units in resort hotel provide year 'round air conditioning

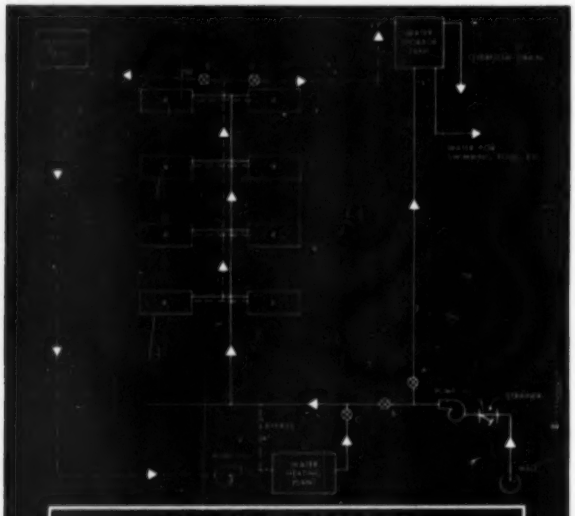
Summer cooling... winter heating



● The Concord Hotel, Kiamesha Lake, New York, found the answer to efficient, economical year 'round air conditioning through the installation of the Remotaire Well Water System—one of a number of different Remotaire systems available for multi-room buildings.

The Remotaire Well Water System may be used in localities where well water is known to be available in adequate supply, proper temperature, and of good quality. The cold well water is used in lieu of a water chilling plant. Consisting of Remotaire Room Units in each room connected by a piping system to the central plant equipment (as shown in the diagram), this system costs less to install and less to operate. Individual control of each Remotaire unit allows the occupant to choose the room temperature that suits him best without affecting adjoining rooms.

This resort hotel installation is another example of the versatility of the Remotaire for hotels, motels, hospitals, apartments, and other multi-room buildings.



HOW THE REMOTAIRE WELL WATER SYSTEM WORKS

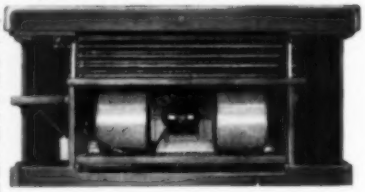
The Remotaire Well Water System consists of Remotaire Room Units in each room connected by a simple piping system to the central plant equipment—a well with pump, water heater, water circulating pump, expansion tank, storage tank and water filter or strainer as shown above.

FOR COOLING—Valves A and C are closed. B is open. Pump No. 1 pumps water from well to Remotaire units on each floor from which it travels thru valve D to storage tank on roof. This water is usable for swimming pool or other purposes.

FOR HEATING—Heating circuit includes Water Heater, Valve C, Valve E, Expansion Tank, Pump No. 2 and bypass. For operation, close Valves B and D, start Pump No. 2 and boiler, and the hot water circulates through the system.

When cooling is not required, well water may be used for other purposes, and can be pumped direct through Valve A to Water Storage Tank by Pump No. 1.

Top Quality Construction... Easy To Install



The Remotaire is sturdily built of heavy-gauge steel—plus a reinforced air grille—with a bonderized, baked-on semi-gloss enamel finish. All air passages are acoustically insulated for thermal efficiency and quietness. Coil is designed for right or left hand connections. Spacious end compartments permit easy access to coil connections and controls. Adaptable to a variety of ventilation systems, the Remotaire is ideal for modernization as well as new construction and is available in three models—200, 400 and 600 cfm.

Write for Remotaire Brochure, Form 298.

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Serving home and industry

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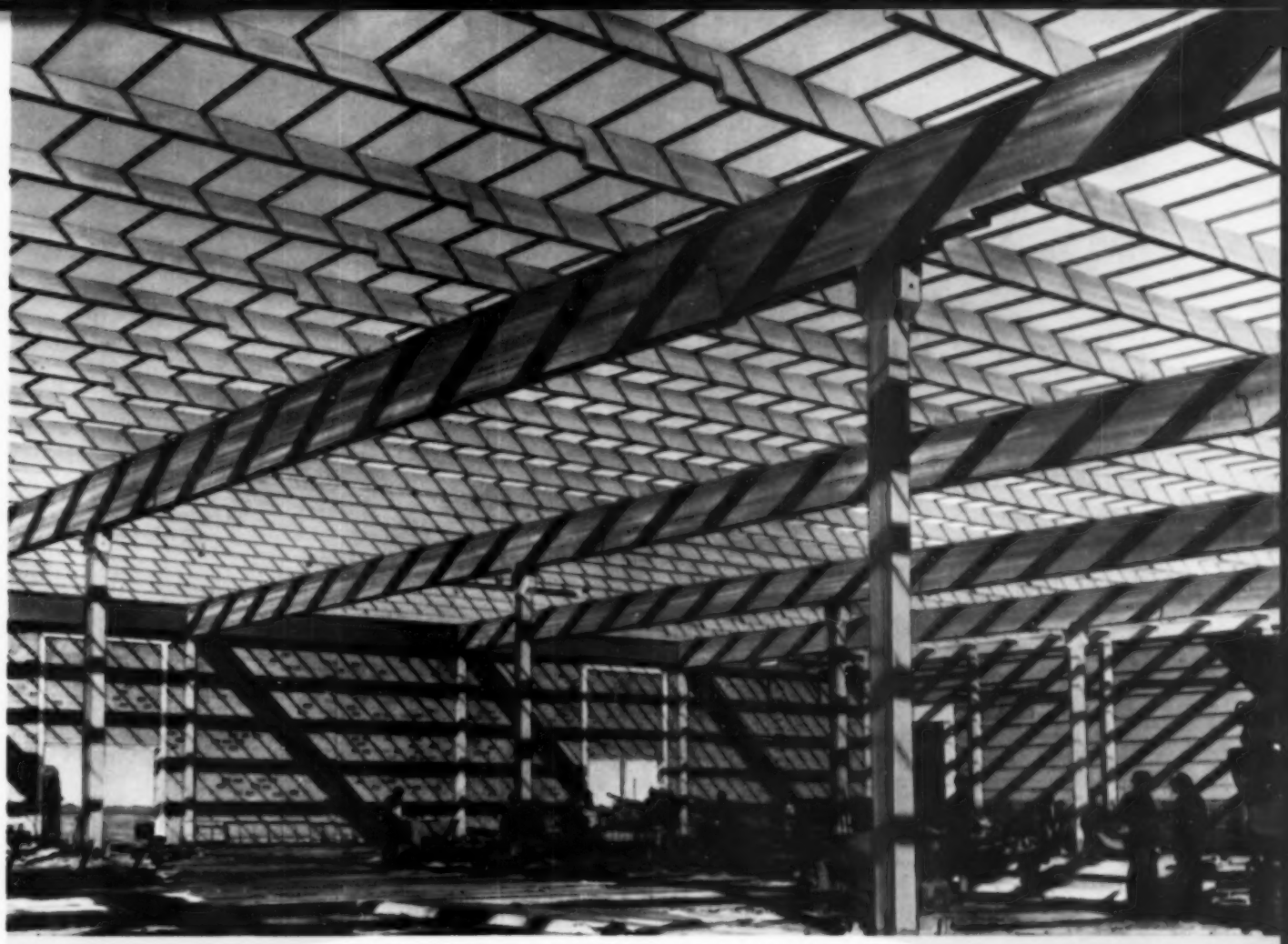

Wyatt Warehouse, North Kansas City, Missouri. Size—117x481 feet. Glulam girders are spaced at 25 feet, with purlins of 8-foot spacing. Architect is William D. Fullerton, Jr., Kansas City, and contractor is Estrin Construction Co., Kansas City.

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and built economically today... with Engineered Timber Construction

Fifty years from now this building will still be structurally sound and functionally efficient.

Structural skeleton is formed by dimensionally stable glued laminated timbers, carefully designed and joined by engineered connecting assemblies which eliminate costly maintenance. Wide span, provided by the cantilevered girders, makes the building adaptable for a wide variety of uses.

Timber Structures glued laminated members are the product of America's largest and most experienced fabricators and laminators of structural timbers. Formed to exact specifications and pattern, in any desired section and length, they are highly resistant to destruction by fire, and free from seasoning action.

These members are used increasingly by leading architects for permanent schools, churches, and industrial and commercial buildings. Outstanding examples of heavy timber construction are contained in the booklet, "Modern Construction with Engineered Timbers". A copy is yours for the asking. See your nearest Timber Structures representative, or write us for it.

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NORTON FLOORS

Safe Footing Always

No slipping hazard—even when wet—Norton Alundum® in this Terrazzo floor (top), Norton Alundum® (C.F.) Aggregate below. And wear resistant against heavy foot traffic, year in and year out.

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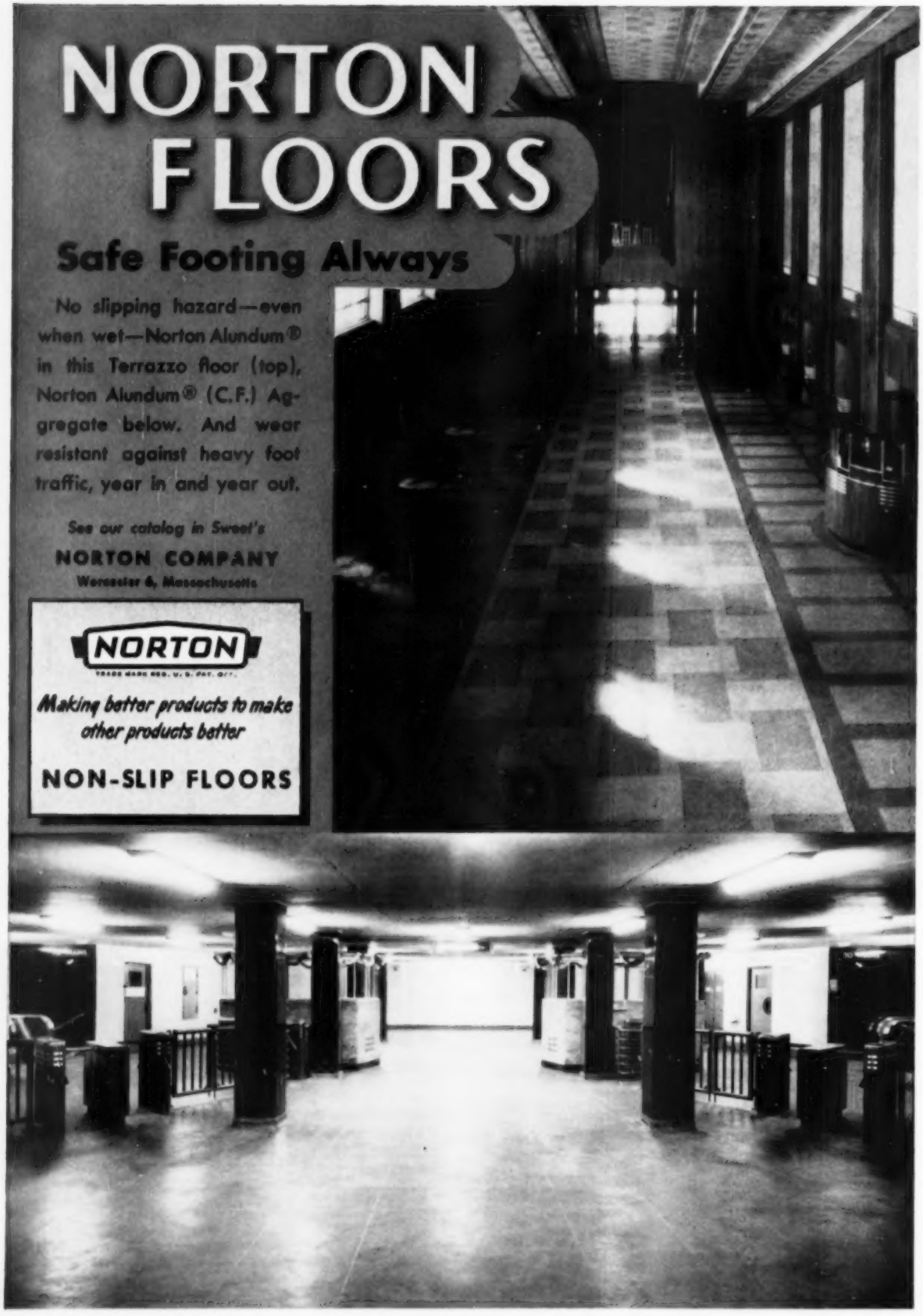
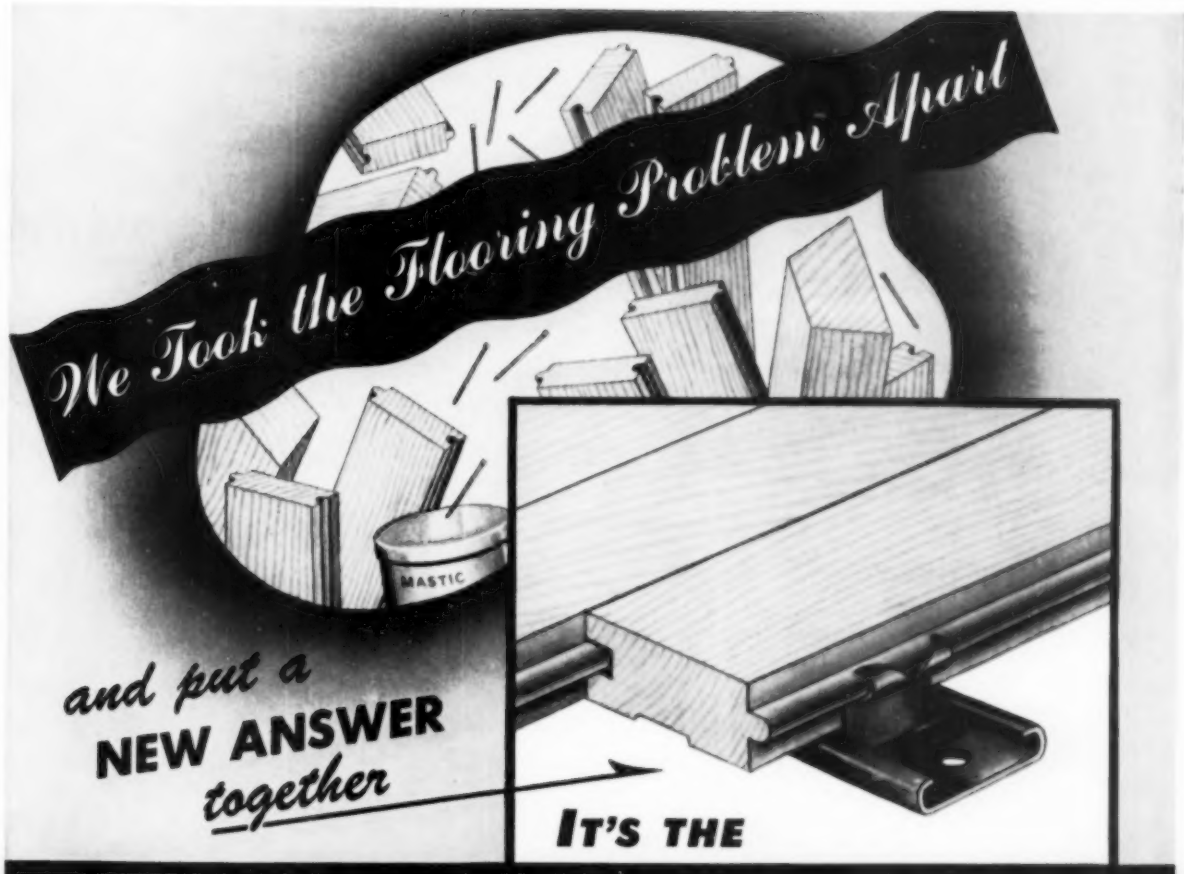
NON-SLIP FLOORS





LOXIT Floor Laying System

THE LOXIT wood floor laying system is designed to lay ordinary tongue and groove strip flooring mechanically. The method is simplicity itself! It is composed of a channel with turned-in edges and a uniquely designed clip. ***No*** nails, ***no*** adhesives and ***no*** wood sleepers are required. ***No*** special tools are needed for the installation. Loxit-laid floors remain permanently beautiful with reasonable care, reducing maintenance costs to a minimum. Installations all over the United States are proving the advantages of the Loxit System.

Technical service, literature, details and samples available upon request!

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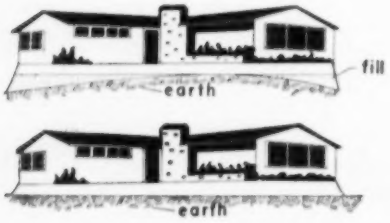
KENRUBBER ... For you who

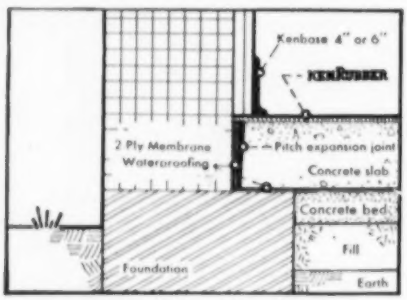
Now you can specify KenRubber for installation on concrete in contact with earth



New KenSet Adhesive was specially developed and made for installing any rubber tile over concrete in contact with earth...if underfloor is at least 12" above surrounding grade and drainage is away from installation. See diagrams above for applicable underfloor levels.

If underfloor is less than 12" above surrounding grade, or drainage is not away from installation as shown below

You can still specify KenRubber with the use of waterproofing membrane to prevent capillarity. If there is a static head more plies may be required than shown in blueprint below.



KenRubber is made in the industry's newest plant which contains all of the new equipment and manufacturing techniques recently created for rubber tile production. Its colors are cleaner and brighter...its marbleization clearer and crisper—free of "muddiness"!

Luxurious in appearance...resiliently comfortable underfoot—KenRubber is also outstandingly tough with "coiled-spring" strength, never soft or flabby. Dirt and grime that grind into other soft rubber tiles, stay on the KenRubber surface...are easily wiped away. Occasional washings and infrequent waxings are all that is needed to keep KenRubber bright and beautiful through years of hardest use.

Specifications and Technical Data

INSTALLATION

Over any smooth firm interior surface that is removed from greases and oils. At left diagrams show how new KenSet adhesive makes possible easier, more economical installations over on-grade underfloors that are at least 12" above the surrounding grade level with drainage away from building.

INSTALLED PRICES

Prices range from 50¢ per sq. ft. to 80¢ per sq. ft. for a minimum area of 1000 sq. ft. over cement depending on which of the thicknesses is chosen, which color group is specified and condition of the underfloor.

THICKNESSES

KenRubber is available in .08" and 1/8" thicknesses for normal demands...3/16" for extra-heavy duty.

SIZES

Standard tile size is 9" x 9". Other sizes furnished on special order.

For more information on KenRubber consult the KENTILE, INC. *Flooring Contractor who is a trained and experienced expert . . . fully qualified to aid you in choosing the proper floor for every residential, commercial and industrial installation. Call on him whenever you wish. For his name and address look under FLOORS in your Classified Phone Directory.*

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The restful, "Cushioned Beauty" of KenRubber softens sounds, helps lessen fatigue in stores, shops and offices. KenRubber color at right is Connemara with Ivy ThemeTile and White Feature Strip.

The distinctive elegance of KenRubber adds value to every home. KenRubber colors above are Verte Isabelle and Purbeck.

KENRUBBER for Cushioned Beauty
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Aggregate transfer imparts a warm yellow to spandrels and floor edges (above) and entrance walls (below) of the Le Bonheur Children's Hospital, Memphis. The same colored aggregate and pigment were used in column concrete. Architect: J. Frazer Smith, Inc., Memphis. Contractor: Harmon Construction Co., Oklahoma City.

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St. Gerard School, one of 13 schools designed by Charles D. Hannan that have *Thermopane* Daylight Walls. ▼

◀ Notice how natural daylight illuminates every part of this room in St. Agatha's School, Detroit, Michigan.

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Thermopane has been used in thirteen Hannan-designed schools and in every addition built onto these schools—convincing evidence that school officials have been pleased with the results.

If you have anything to do with school design or operation, you will enjoy reading the newest, authoritative publication on school daylighting, *How to Get Nature-Quality Light for School Children*. For a free copy write Libbey·Owens·Ford Glass Co., 4563 Nicholas Bldg., Toledo 3, Ohio. *®

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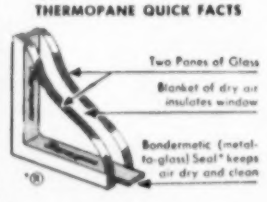

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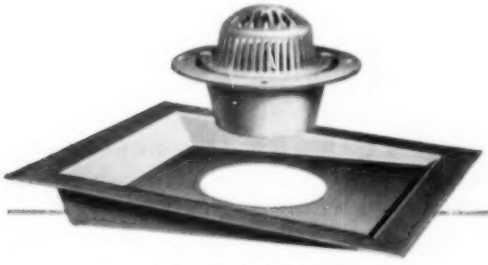

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Engineers: Marius Anderson & Associates
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Floored in MFMA Northern Hard Maple.

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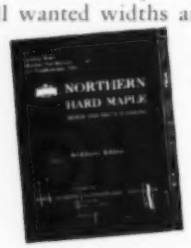

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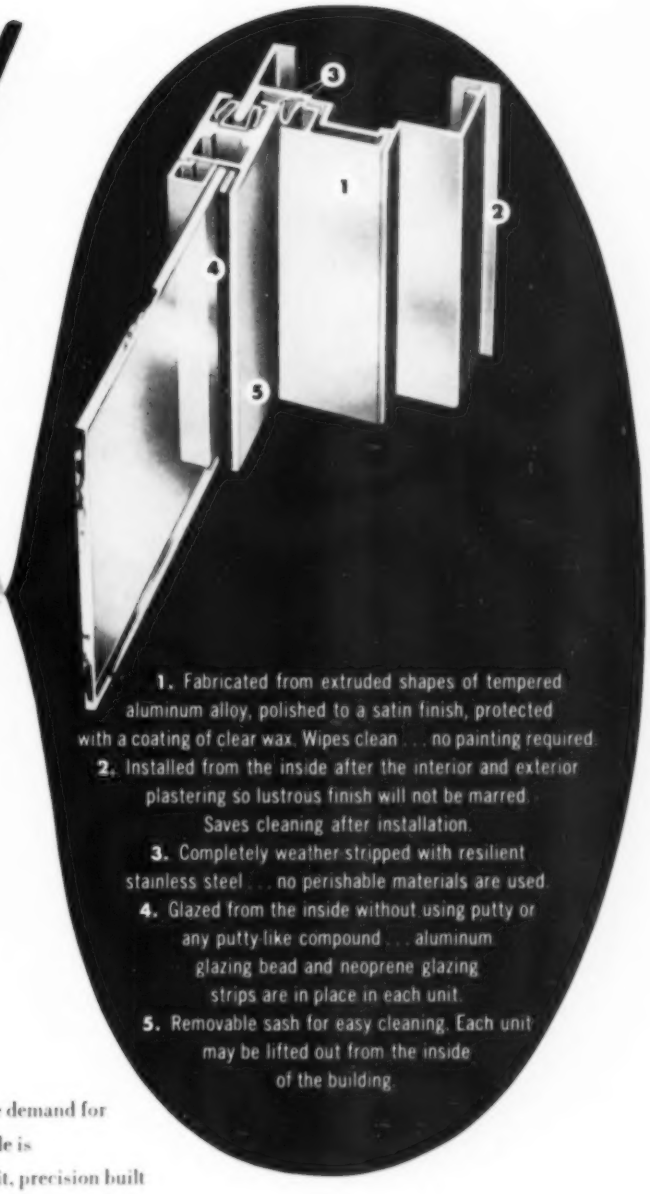

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Rust-Oleum *saves* preparation, *saves* manhours! Just scrape and wirebrush to remove rust scale and loose particles . . . then brush Rust-Oleum 769 Damp-Proof Red Primer *directly over the sound rusted surface*. Rust-Oleum finish coatings in many colors, aluminum, and white provide *double protection*. Specify Rust-Oleum for new construction, maintenance, or re-modeling. Prompt delivery from Industrial Distributor stocks in principal cities.

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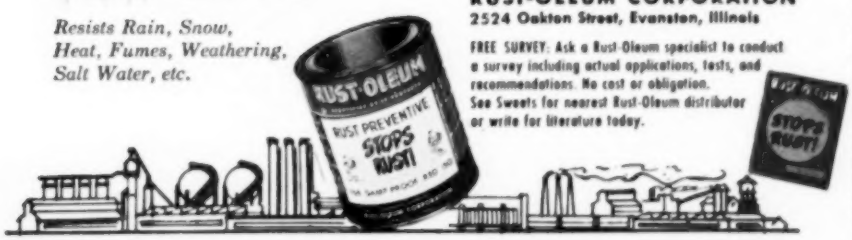

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It incorporates a specially-processed fish oil vehicle that will *dry*, is *odor-free*, and is formulated in many *colors*, *aluminum*, and *white*. Specify genuine Rust-Oleum. Accept no substitute.

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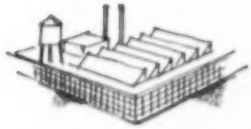

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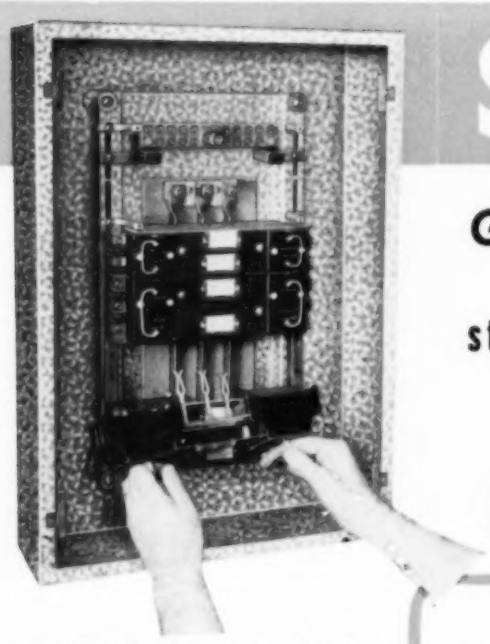
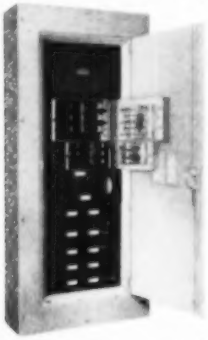


Pulfuzswitch Type of Panelboard with 30 ampere, 2 and 3 pole branches. Box is 19 1/2" wide and 4 3/4" deep.



Panelboard illustrated is a combination of Pulfuzswitch and Klampswitchfuz branches. Box size is 24" wide and 10" deep.

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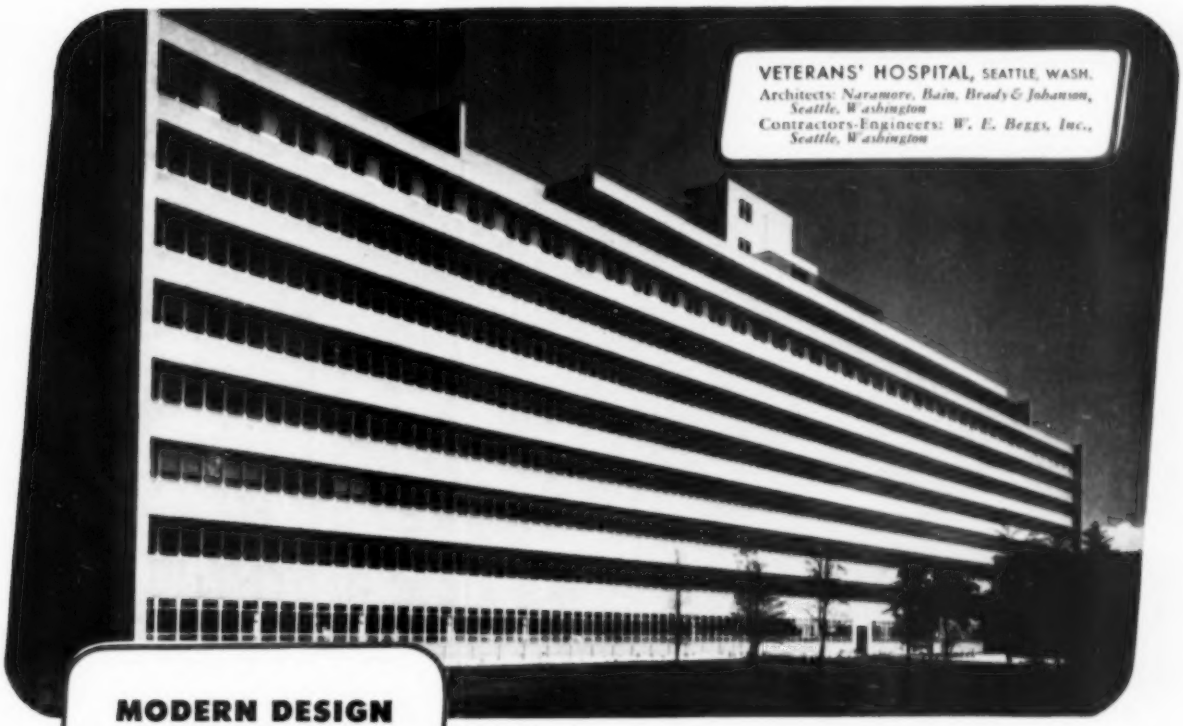

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Architects: *Naramore, Bain, Brady & Johanson, Seattle, Washington*
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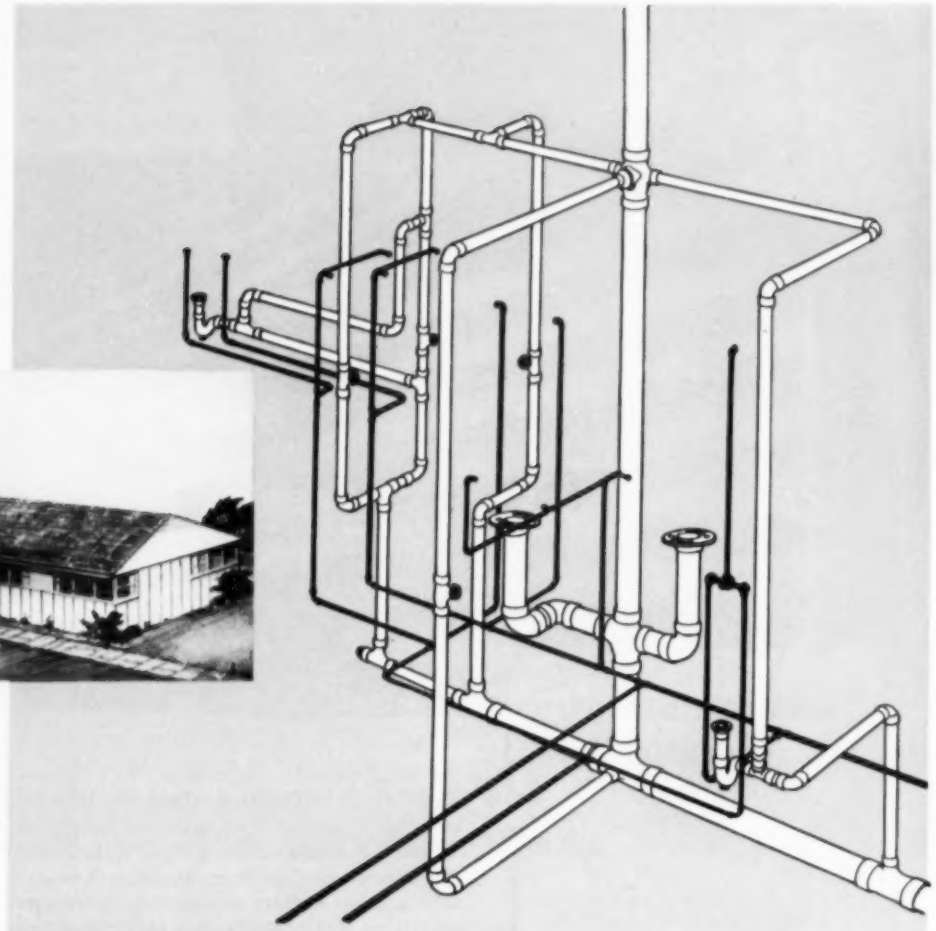
COPPER TUBES

Architect Walter T. Anicka's "ranch" house is ideal for small-lot, built-up urban areas. It is one of seven plans chosen by the 1953 American Builder Catalog Directory to provide builders with typical construction problems.



Solid Piping—Type "L" Copper Tube: Water Lines
Outline Piping—Type "M" Copper Tube: Soil, Waste and Vent Lines

Easily installed copper adds long life to this "typical" ranch house

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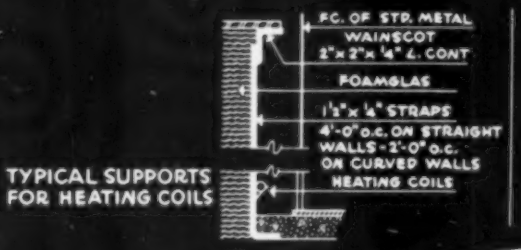

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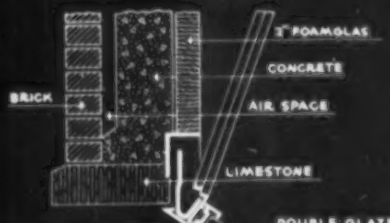
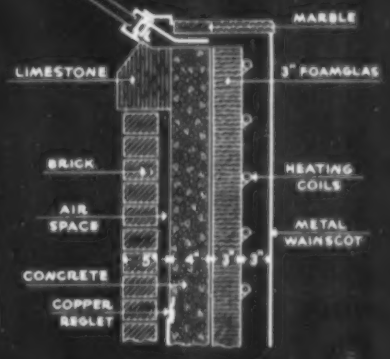
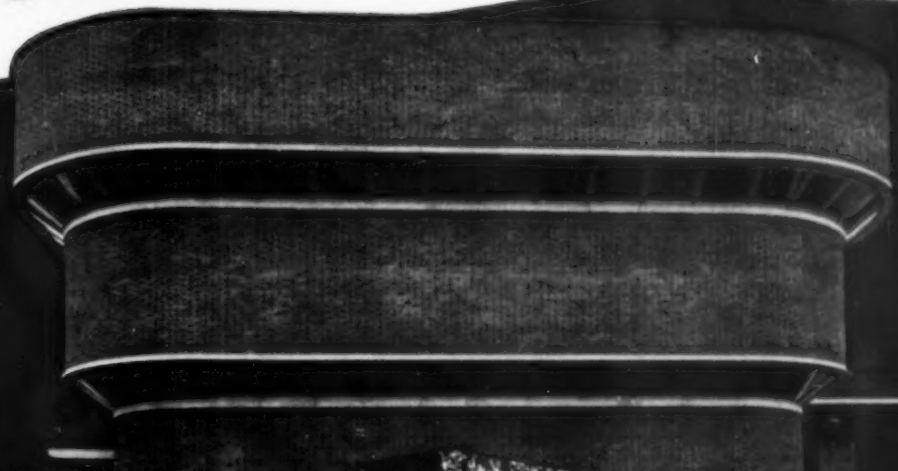


TYPICAL WALL SECTION

Springmaid's "floating walls" never get wet...thanks to FOAMGLAS®





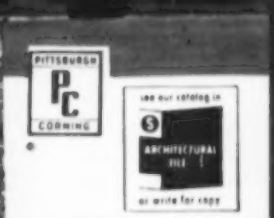
Architects and Engineers:
Robert and Company Associates, Inc., Atlanta, Ga.

General Contractors:
The George A. Fuller Company, New York, New York

FOAMGLAS was selected by Robert and Company Associates, Architects and Engineers, to insulate the radiant heated and cooled "floating walls" of this remarkable building housing the General Offices, Pilot Mill and Research Laboratory of the Springs Cotton Mills, Fort Mill, South Carolina.

The moisture-proof sealed glass cells of FOAMGLAS make it possible to control precisely the temperature and humidity within such air conditioned buildings. Your clients, too, will benefit when you specify FOAMGLAS. For more information about this efficient, long-lasting insulation send us the coupon right away.

PITTSBURGH CORNING CORPORATION
One Gateway Center • Pittsburgh 22, Pa.



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Please send me free sample and booklets on use of FOAMGLAS for:

- ☐ Normal Temperature Buildings
- ☐ Piping and Equipment
- ☐ Refrigerated Structures

☐ Send engineer to help with specific problem
☐ Advise nearest source of supply

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COMPANY _____

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RUBEROID SPECIAL ROOFING BITUMEN

The answer to a ~~maiden's~~ ROOFER'S prayer

AS all good pitch men and roofers know, the squeeze is on. Tar and pitch are in short supply because the steel industry is using it with coke in the furnaces and as fuel.

It means that if there is to be enough roofing bitumen to meet the demand, something has to be done. Ruberoid is doing it!

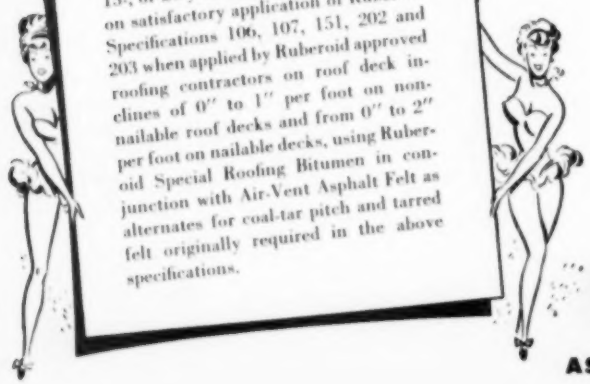
Back in the horse-and-buggy days a few roofing manufacturers made fine roofing bitumens, familiar to older men in the industry under such famous names as Keystone, Imperial, Trinidad Lake, Warren Anchor, etc. For years, these were specified by architects and used by the trade on flat roofs even though their cost was 25% to 50% over roofing pitch.

There were two reasons why coal-tar pitch displaced these bitumens on flat work: 1) It was cheaper; 2) The quality of commercial mopping asphalts deteriorated because the petroleum industry concentrated on high-octane gasoline production to the detriment of mopping asphalt end-products.

Now, those reasons no longer apply. 1) In developing Ruberoid Special Roofing Bitumen we just reached into the archives, pulled out a manufacturing formula that had years of proven success and came up with a product to meet that formula. 2) The cost is no longer at a premium.

Ruberoid Special Roofing Bitumen is not a substitute for coal-tar pitch. It is an *alternate*. Ruberoid will continue to supply as much pitch as we can produce or obtain. But there just won't be enough. Ruberoid Special Bitumen is a proven alternate product for use in situations when and where pitch is in short supply and building schedules would be jeopardized.

Ruberoid will issue its customary 10-, 15-, or 20-year Surety Bond guarantees on satisfactory application of Ruberoid Specifications 106, 107, 151, 202 and 203 when applied by Ruberoid approved roofing contractors on roof deck inclines of 0″ to 1″ per foot on nailable roof decks and from 0″ to 2″ per foot on nailable decks, using Ruberoid Special Roofing Bitumen in conjunction with Air-Vent Asphalt Felt as alternates for coal-tar pitch and tarred felt originally required in the above specifications.



Executive Offices: 500 Fifth Avenue, New York 36, New York

The RUBEROID Co.

ASPHALT AND ASBESTOS BUILDING MATERIALS

pick the stainless that fits best

When selecting stainless steel be sure you pick the correct type for your particular application. For some grades resist corrosion better . . . others have superior heat resistant properties. Some are easier to machine . . . still others can be more readily formed or welded.

In every case there is a grade of Crucible REZISTAL Stainless Steel that is best suited to the job. And to help our customers select the type that will provide the best service for the lowest cost, we make available all the design, metallurgical, fabricating and application data we have accumulated in our years of stainless steel experience with many different industries.

Our staff of field representatives brings you the benefit of our vast technical resources. And the quality of REZISTAL Stainless Steel sheets, strip, plates, bars, wire, forgings, castings and tubing produced in our modern integrated mills is unsurpassed in the industry. When you have an application for stainless, call Crucible.

Write for free copy of "Making the most of Stainless Steels in the Chemical Process Industries".

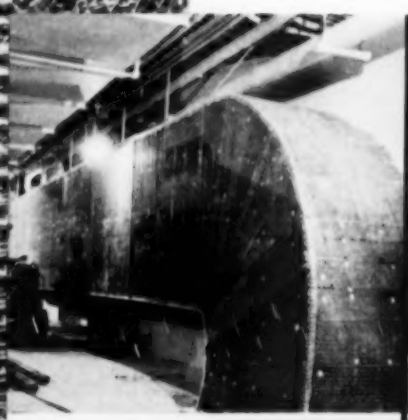
CRUCIBLE first name in special purpose steels

53 years of Fine steelmaking **STAINLESS STEEL**

CRUCIBLE STEEL COMPANY OF AMERICA, GENERAL SALES OFFICES, OLIVER BUILDING, PITTSBURGH, PA

STAINLESS • REX HIGH SPEED • TOOL • ALLOY • MACHINERY • SPECIAL PURPOSE STEELS

Proved on many thousands of types of reinforcing jobs all over the nation, the outstanding features of Keymesh make it the most versatile and *preferred* lightweight reinforcing obtainable. It is not only economical to use, easy to handle, but goes up fast, is noninjurious to the hands, provides smooth troweling, and really reinforces through its open-mesh design. The reverse twist weave and the hexagonal mesh design provides multidirectional reinforcing as well as greater bonding surface.



Keymesh used to provide a tight, durable key for insulation covering on supply ducts.

Applying Keymesh reinforcing as a base for interior tile. Notice the ease of handling.

see our CATALOG in SWEET'S FILE

2d 11a 3d

Keymesh reinforcing lays flat as a strong, crack-resistant underbed for terrazzo floor—a more attractive and durable floor results.

KEYMESH GALVANIZED REINFORCING

the most versatile lightweight reinforcing you can obtain

As tile or terrazzo underbed reinforcing or used with concrete, mastic, oxychloride, asphalt emulsion and other finishes for *floors and walls*—Keymesh has gained wide acceptance and preference. It is easier to handle on the job, rolls out flat, and provides multi-directional reinforcing with greater bonding surface through its reverse twist weave and hexagonal mesh design.

Keymesh also assures a firm, crack-resistant base for any type of *roof deck* finish applied over a "mix" substance. In addition, it makes an easy-to-apply base for the insulation of large air ducts, pipe lines, outside tanks and vaults. Tile or similar surfacing installations applied over tubs, in showers, or in complete bathrooms remain water tight and structurally sound when the base is reinforced with Keymesh.

In fact, Keymesh will provide more permanent reinforcement for lasting quality and beauty on any location where stucco, plaster, concrete, or any finish over a "mix" base substance is used.

ASK YOUR SUPPLIER ABOUT KEYMESH

Roof deck installation starts with the application of Keymesh reinforcing in easy-to-handle rolls.

Keymesh reinforcing was nailed direct to old floor. New floor surfacing is being applied here over the reinforced base.

Keymesh reinforces plaster or any base for wall or floor tile assuring maximum crack resistance.

KEYSTONE STEEL & WIRE COMPANY, PEORIA 7, ILLINOIS

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KEYSTONE WELDED WIRE FABRIC • KEYSTONE TIE WIRE

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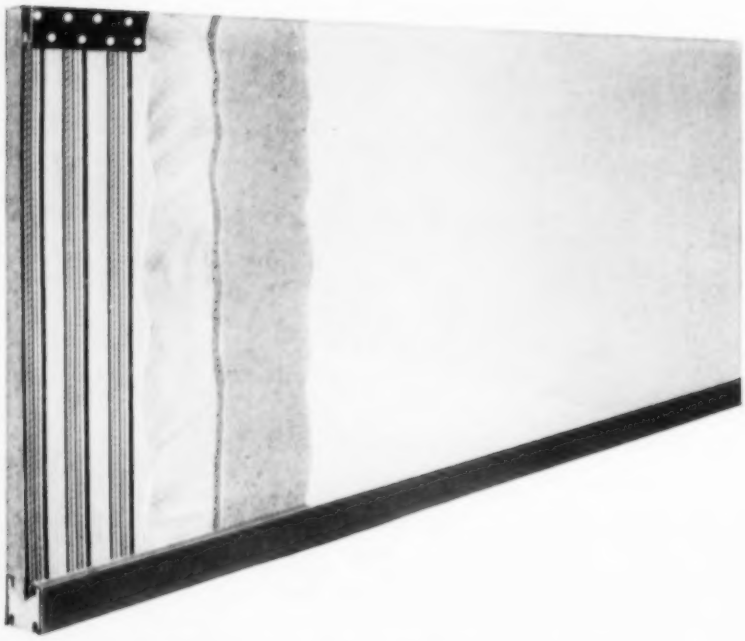


Look-
NO STUDS!

The most inexpensive Metal Lath and Plaster 2-inch Solid Partition yet designed!

BUILT with Gold Bond ⅜" Rib Lath, this studless, non-bearing partition gives you these advantages:

LOW COST – Elimination of studs cuts material cost, saves labor expense, permits faster construction.

SOUND INSULATION – 38.2 decibels sound transmission loss using gypsum sanded plaster.

LIGHTWEIGHT – Only 18 pounds per square foot of partition using sand aggregate.

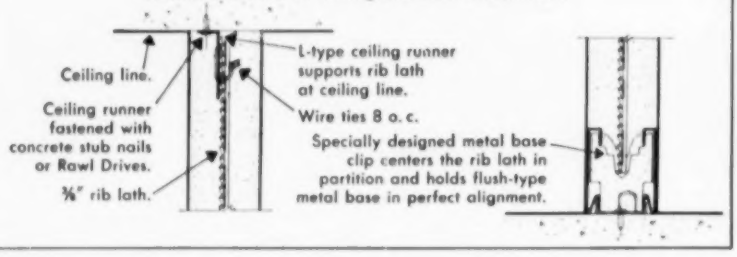
FIRE PROTECTION – Earns one hour fire rating using one part gypsum plaster to two parts sand by weight for both scratch and brown coats.

REQUIRES LESS SPACE – Occupies only one half to one third as much floor space as wood stud or masonry partitions.

CRACK AND IMPACT RESISTANCE – Has the same strength and crack resistance power as 2-inch solid partition built with studs.

Before you specify any wall system write our Metal Lath Sales Department for complete details and specifications.

Technical details for ceiling and floor attachments


Ceiling line.
Ceiling runner fastened with concrete stub nails or Rawl Drives.
⅜" rib lath.
L-type ceiling runner supports rib lath at ceiling line.
Wire ties 8 o. c.
Specially designed metal base clip centers the rib lath in partition and holds flush-type metal base in perfect alignment.

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BUFFALO 2, N. Y.

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Lath, Plaster, Lime, Sheathing, Roofing, Siding, Gypsum Roof Decks, Wall Paint, Textures, Rock Wool Insulation, Metal Lath, Sound Control Products, Fireproof Wallboards, and Decorative Insulation Boards.

another beautiful spire...

crafted by Overly

METAL PRODUCTS SINCE 1888

A major portion of the Building Improvement Program of the Zion's Evangelical Lutheran Church, Greensburg, Pennsylvania, was the dismantling of the old deteriorated slate spire and its replacement with a new inexpensive aluminum covering. Architect: Paul A. Bartholomew, Greensburg, Pennsylvania. Aluminum spire, prefabricated and erected by Overly, has a gray-green Alrok finish. The finial and cross are caustic etched aluminum for bright contrast. The applied herringbone pattern adds interest to the design.

● *For further information, write for Catalog 7-B.*

OVERLY MANUFACTURING COMPANY
GREENSBURG, PENNSYLVANIA
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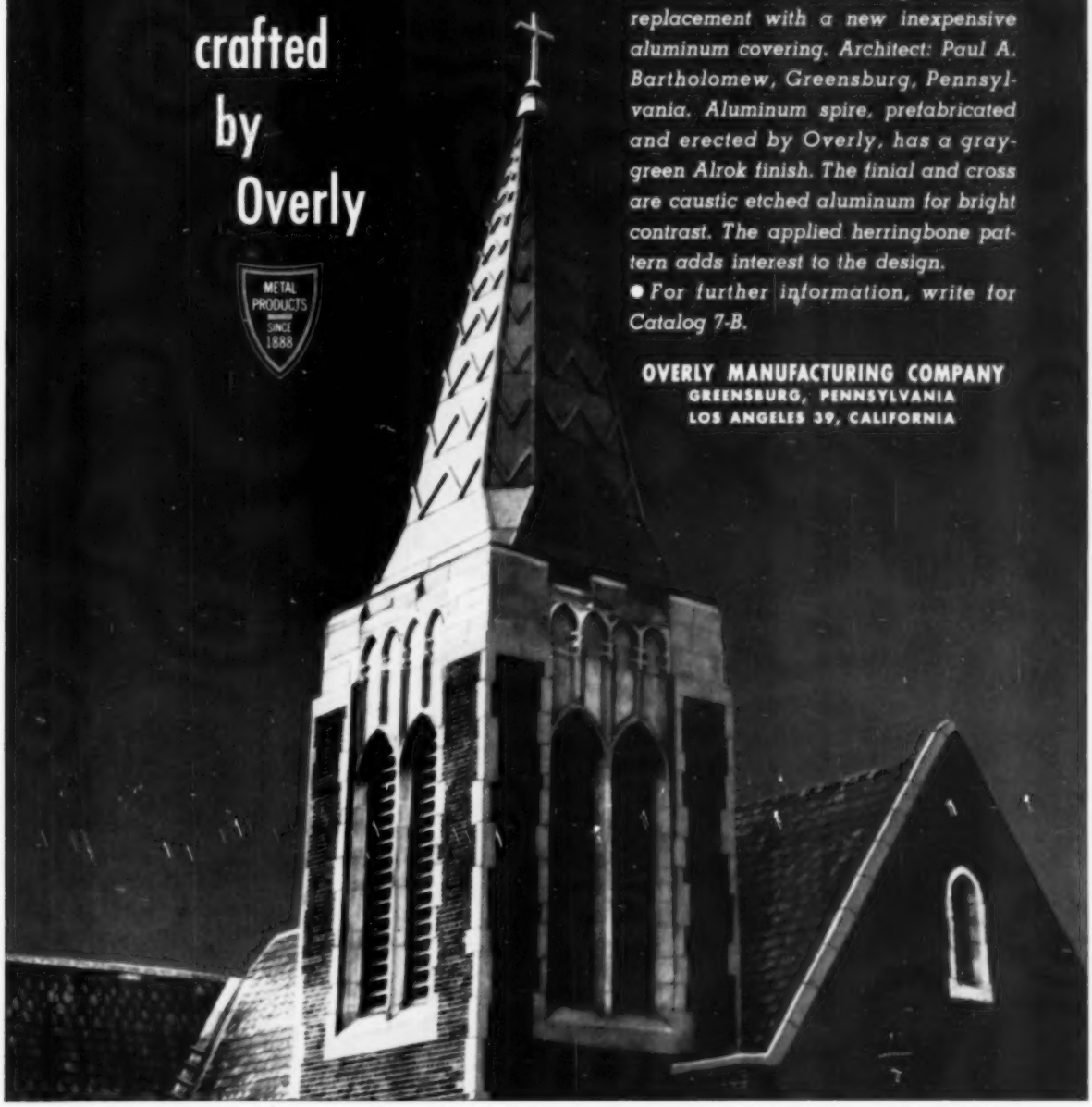
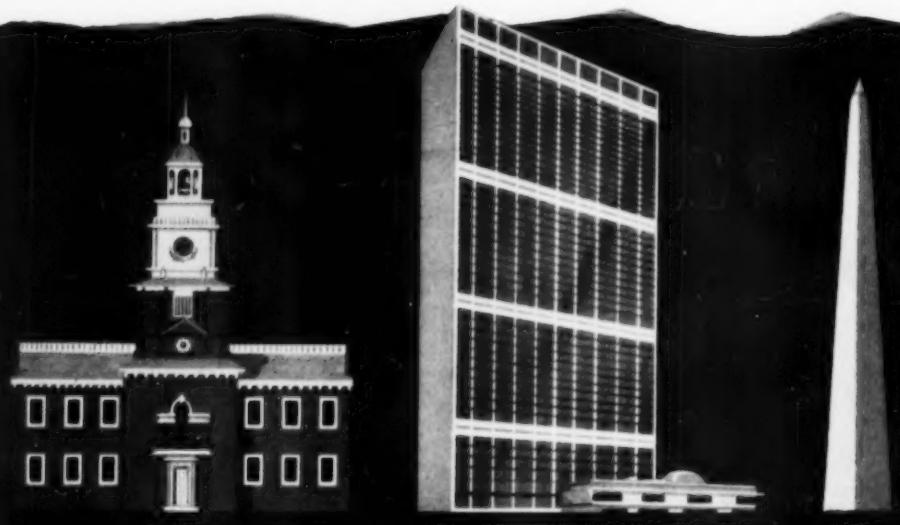


Historical American Landmarks

are Safeguarded and Beautified with **MEDUSA WHITE**



Independence Hall

In the recent restoration of Independence Hall in Philadelphia, Medusa White was used to repoint the masonry work.

The United Nations Permanent Headquarters

Medusa Waterproofed White was used recently for setting and pointing the marble, for back-up brick work, and in the terrazzo in the main lobby of this international landmark.

Washington Monument

Years ago when the Washington Monument was restored, its marble joints were pointed up with Medusa White Non-Staining Portland Cement mortar. The grout was neat cement and water, of a very thin consistency.

● When architects and builders are called upon to build or restore historical landmarks the selection of materials must be on a sound basis of proved dependability. Medusa White Portland Cement, the original white cement, is one of those dependable materials that is chosen over and over again to help construct, restore and protect historical buildings like those above.

For 47 years Medusa White (plain or waterproofed) has been used to give construction a distinctive and permanent beauty. No other cement has ever equalled its white color—a white that's diamond blue—not pink or yellowish in cast.

Specify this famed non-staining white cement plain or colored in those jobs requiring the most attention and confidence. Use it in cast stone, stucco, pre-cast concrete slabs, terrazzo floors. You can depend on the white of Medusa White.

You can build BETTER with MEDUSA PRODUCTS

MEDUSA PORTLAND CEMENT COMPANY

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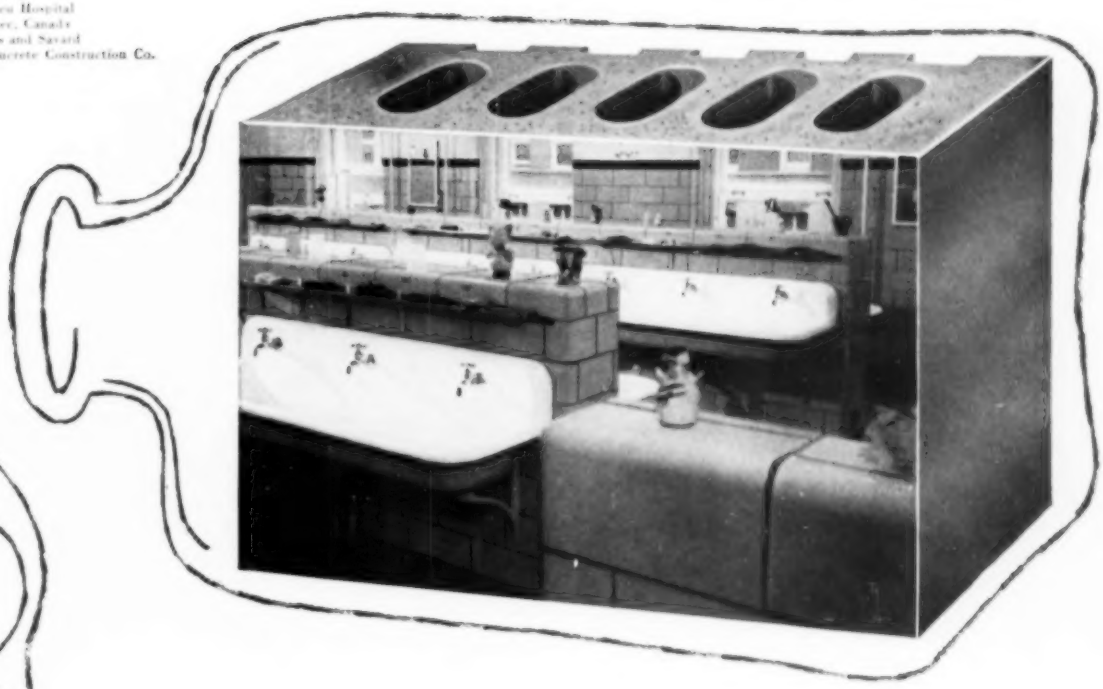
Children's Lavatory
St. Jean De Dieu Hospital
Montreal, Quebec, Canada
Architect: Brais and Savard
Contractor: Concrete Construction Co.



Preventive medicine for maintenance worries...

STARK GLAZED FACING TILE

When you specify Stark Glazed Facing Tile for hospital interiors you can be sure that your clients' maintenance requirements will be lighter—for the entire life of the building.

Years of use in hospitals all over the country have proved that this economical "wall-and-finish-in-one" cleans as easily as a test-tube, resists rough usage—and never needs refinishing.

Now, Stark Glazed Facing Tile offers an added asset for hospitals—a scientifically developed range of colors which permits you to improve vision in laboratories and operating rooms, brighten corridors and lobbies, or reduce glare in solariums. You can specify the *right* color—and be sure that it will *stay* right for years to come.

Our new brochure on Modular Masonry contains full data. To obtain one, write us on your letterhead. Address: Desk PA-6. Our reference in Sweet's Catalog is 4f-St.

FTI Member of Facing Tile Institute

STARK *Ceramics, Inc.*
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The TIME-TESTED MATERIAL

- **It is non-combustible . . . won't burn.**
- **It is rigid . . . doesn't sag or warp.**
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- **It won't corrode or stain.**
- **It resists chemicals—acids, solvents, etc.**
- **It retains its original clarity, brilliance and lustrous beauty.**
- **It is easily installed, maintained and cleaned by conventional methods.**

The traditionally-preferred material for window and skylight glazing, glass, and glass alone, gives you the proven performance you need for better daylighting at ultimately the lowest cost.

Send for free catalog, "ABC's of ROLLED GLASS" Samples on request.

see our catalog in ARCHITECTURAL FILE or write for copy

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WORLD'S LARGEST MANUFACTURER OF ROLLED FIGURED AND WIRED GLASS

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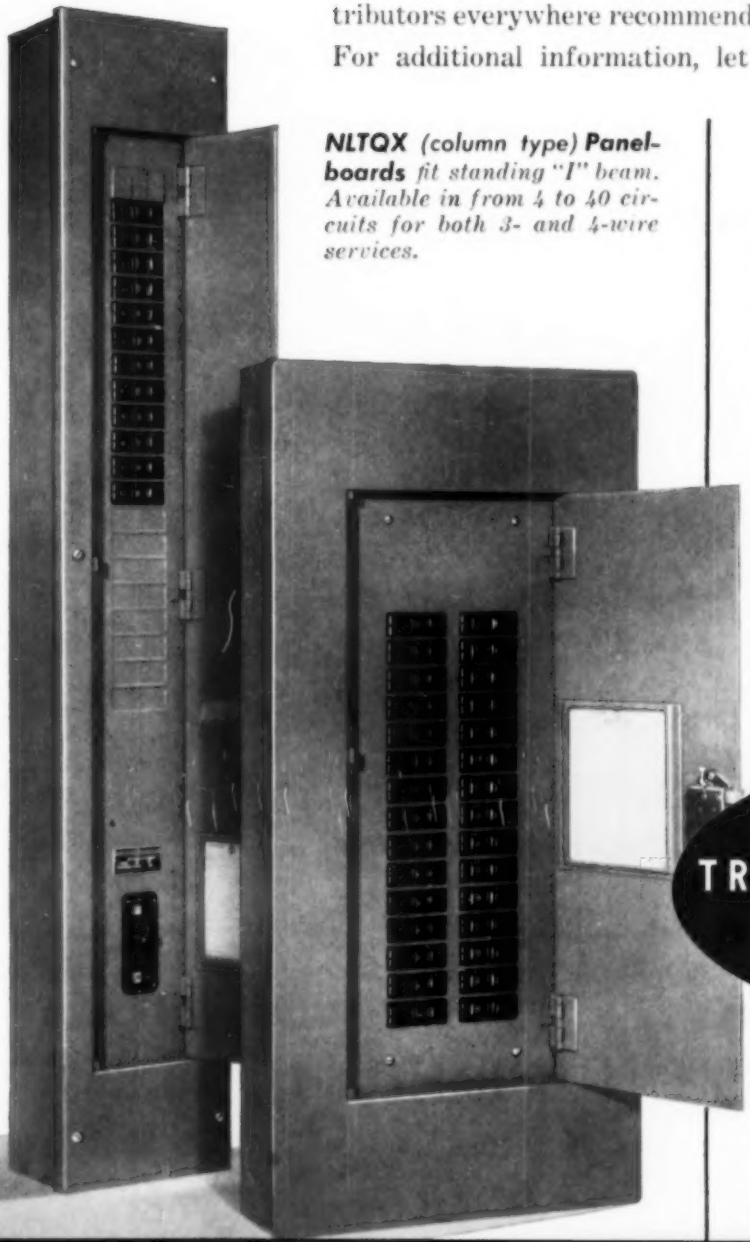
..for more convenience in less space with maximum protection and flexibility for future needs

Trumbull's fifty-year leadership in panelboards has never been more in evidence than in its NLTQ line. Leading electrical distributors everywhere recommend them and carry complete stocks. For additional information, let us mail you Bulletin TEB-14.



***NLTQX** (column type) **Panelboards** fit standing "I" beam. Available in from 4 to 40 circuits for both 3- and 4-wire services.*

3 WAYS BETTER . . .

1. Circuit breaker convenience and protection. Type TQL. Quick-make, quick-break. Thermal-magnetic trip, arc-quenching design and trip-free action for top protection. Convenient plug-in design and manual re-set. Equally important, it has a separate trip indicating position.

2. Strong compact interiors readily removable for fast installation. Busbars molded in plastisol, and braced against damage from current surges. Run cooler than in open air.

3. Compact boxes, protected fronts. Adequate knockouts and gutters. Front integral with barrier. Breaker knockouts in front panel to provide for future circuits.

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DEPARTMENT OF GENERAL ELECTRIC COMPANY
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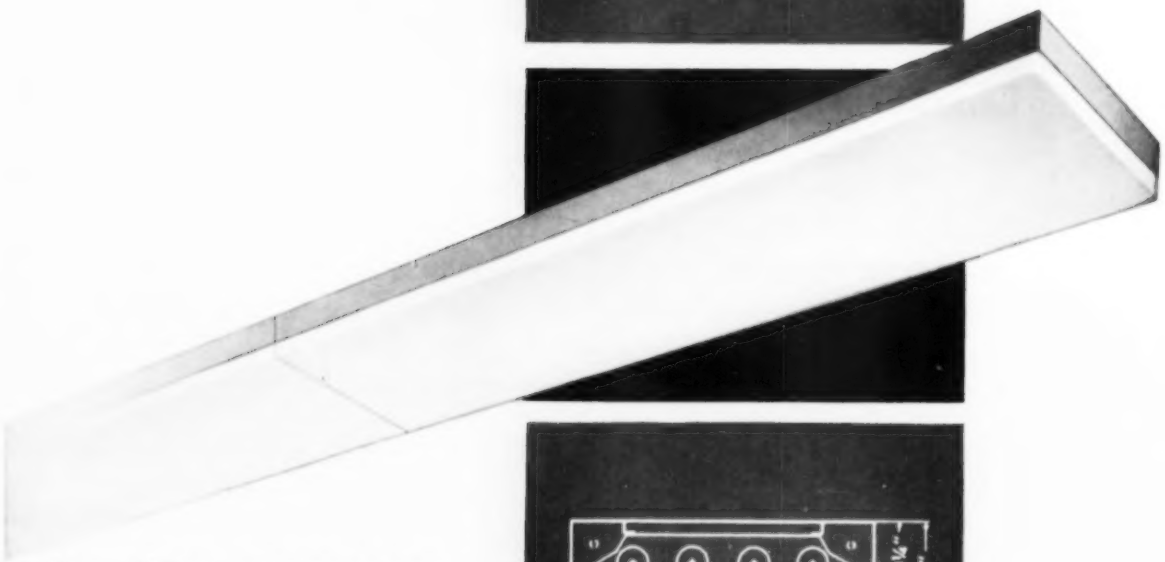
***NLTQ Panelboards** available in from 4 to 42 circuits for both 3-wire and 4-wire services with lugs only or Trumbull 50 - 225 ampere breakers in the mains, and TQL 120 volt, 10 to 50 ampere circuit breakers on branches. AC only. Underwriters' Laboratories, Inc. listed.*

optiplex



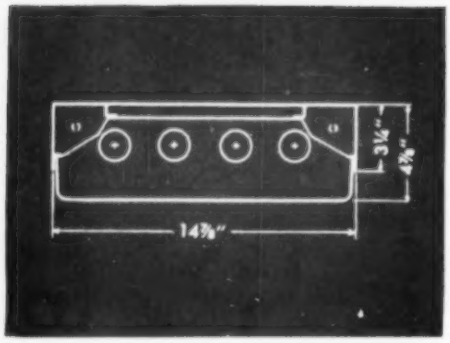
crisp, clean appearance... evenly diffused lighting

MOLDED PLEXIGLAS DIFFUSERS spread soft, even illumination throughout the area and onto ceiling, relieving unwelcome brightness contrasts.

SMOOTH WHITE SURFACES of fixtures and diffusers provide unobtrusive appearance that blends into ceiling design.

RAPID START TRANSFORMERS light fixtures instantly without flicker. No starters required.

TWIN WIRING CHANNELS and full aluminum reflectors assure full transformer life and maximum lamp output. Diffusers snap in and out with fingertip pressure for easy servicing.



Installation at Sinclair Oil Co., New York
Architect: Carson & Lundin

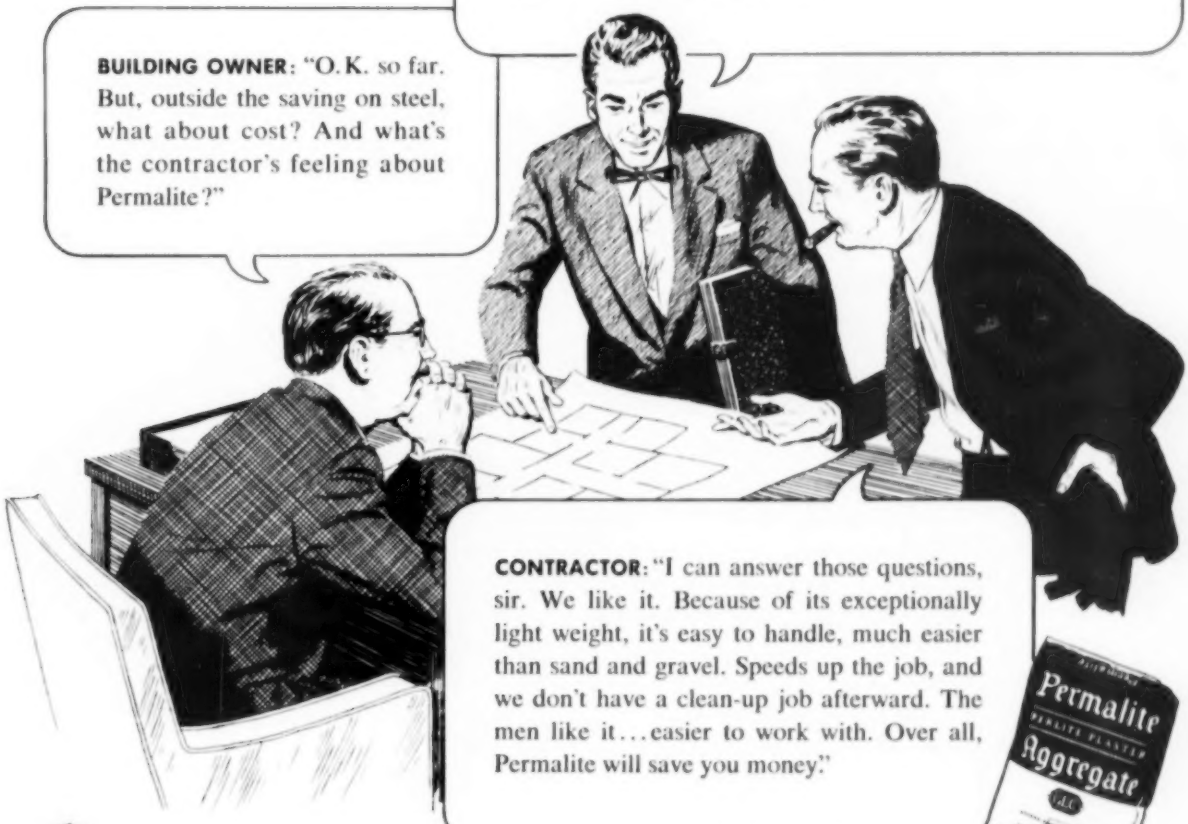
Lightolier Optiplex is available in recessed, surface or stem mounting, single or continuous runs. For complete catalog and data, write LIGHTOLIER, INC., Jersey City 5, N. J.

LIGHTING *by* LIGHTOLIER

There are lots of advantages in every sack of PERMALITE . . .

ARCHITECT: "As I explained to you earlier, sir, we've been able to reduce the structural steel requirements on your building by figuring to use Permalite for both concrete and plaster. With Permalite as the aggregate, we'll have a concrete with only one-third to one-half the weight of regular concrete—and with ample strength. Our curtain walls can be lighter and thinner, with improved insulating values. And here, on the columns and ceilings, Permalite/plaster will give us tremendous savings in both dead load and expense . . . and meet all code requirements by giving us up to 4-hour fire-ratings, too."

BUILDING OWNER: "O.K. so far. But, outside the saving on steel, what about cost? And what's the contractor's feeling about Permalite?"



CONTRACTOR: "I can answer those questions, sir. We like it. Because of its exceptionally light weight, it's easy to handle, much easier than sand and gravel. Speeds up the job, and we don't have a clean-up job afterward. The men like it . . . easier to work with. Over all, Permalite will save you money."

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NAILABLE STEEL V BAR JOISTS

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FOR ARCHITECTS, INDUSTRIAL DESIGNERS
who prefer the structural adaptability of the ONE STEEL JOIST that fits all job requirements without hours of labor at the site.

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who save hours of labor and tons of material with Macomber Nailable Steel Joists.

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who can prefabricate piping layouts because all panel points of all Macomber Joists are on 24" centers.

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ORIGINATORS OF THE OPEN WEB STEEL JOIST

STANDARDIZED STEEL BUILDING PRODUCTS

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BRASCO STORE FRONTS and ENTRANCES

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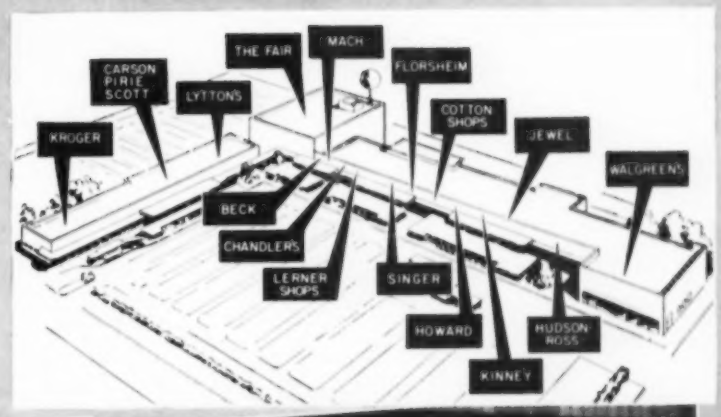
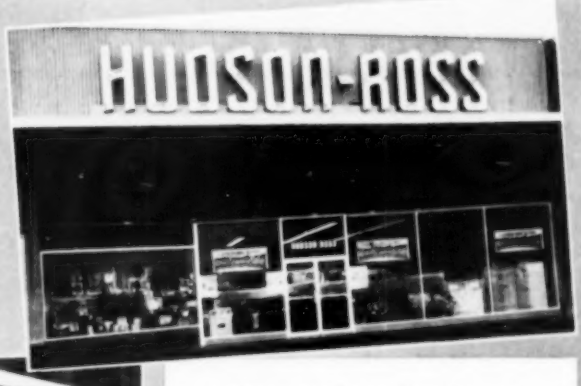
General Contractor: **George A. Fuller Company**





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A COMPLETE LINE FOR EVERY DESIGN

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CECO HAS ACHIEVED AN EXACTNESS IN INTERMEDIATE WINDOW DESIGN THAT MEETS THE NEED OF THE PRESENT... SETS THE PATTERN FOR THE FUTURE

It's easy to make a cheap product and it's easy to over-manufacture. But it requires ingenuity and infinite skill to create the ideal of quality and selection without compromising value or indulging extravagance.

Only CECO offers you 1¼" and 1½" intermediate windows

For years Ceco engineers have been experimenting so as to give you the "just right" window. Today we can announce mission accomplished in the two new Ceco creations . . . 1¼" Intermediate Windows and 1½" Intermediate Windows. For here are two windows that can be adapted to any building problem where intermediate design is indicated. The 1¼" window gives you weight and strength plus beauty at a *sensible* price. Hardware is handsome bronze lacquer finish. The 1½" window assures greater strength and rigidity, *adequate* for any need, longest trouble-free service, will outlast any structure. New beauty is reflected in rich solid bronze hardware. In these new windows Ceco has reached deeply into the future to bring you truly balanced design plus an innovation in simplicity . . . an exactness you can find nowhere else.

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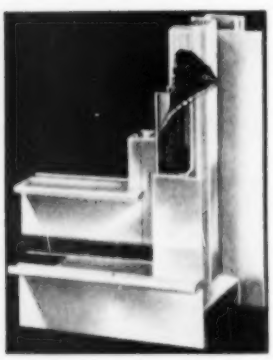

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Architecture of Seattle

This issue of P/A appears in the same month with the 85th Annual Convention of the American Institute of Architects in Seattle, Washington, the program for which is planned around the theme, "A New Country-A New Architecture." In the following pages we extend to our entire readership some of the aura of the Convention; the architectural aspect of the City of Seattle; and a look at a few of the buildings that, were you there, you would note as landmarks of the architectural past or hallmarks of current vitality. For delegates to the Convention, P/A and the Book Division of the Reinhold Publishing Corporation, in collaboration with the A.I.A., has prepared *A Guide to Seattle Architecture, 1850-1950.* This handbook, compiled and edited (with local assistance) by Victor Steinbrueck, Seattle Architect, will be distributed *gratis* to those who attend the Convention, for their guidance in seeing local work of merit—work that was selected through a poll of the Washington State Chapter's membership. For those who are not delegates, cannot attend the Convention, or are not A.I.A. members, we present herewith a summary of the discussion of Seattle's architectural background that appears in the guidebook.

•

Bountiful resources—game from the forests; fish from the sea and streams; berries and roots from the open places; the incomparable stand of timber—made the Pacific Northwest Indians one of the most favored of peoples. When the early white settlers arrived, Chief Seattle, and many other Indians in the Puget Sound area, lived, not in tepees or log cabins, but in huge wood houses of a sort not found elsewhere—flat-pitched, shed-roofed structures, *up to 900 feet in length,* built of sturdy poles and beams, with planks attached by cedar withes. Several families lived in a single structure, and several buildings formed a village.

Although navigators and trappers had visited the Pacific Northwest Coast intermittently since as early as 1543, it wasn't until 1850 that the first white settler, John C. Holgate, selected a timber claim in the Duwamish Valley, now an industrial section of Seattle. Other settlers soon followed, and in March, 1852, at the invitation of Chief Seattle, Dr. David S. Maynard, a graduate of the Vermont Academy of Medicine who had migrated to the region around present-day Olympia, arrived, opened a general store, and embarked on a lively business of shipping fish and timber to the booming gold town of San Francisco. In 1853, Henry Yesler, a Maryland-born Ohioan came to Seattle and established the first sawmill.

From the outset, the community was a mill and commercial center, never a village of log cabins. The simple, early, frame houses were built with walls of fir clapboards or board-and-batten and had cedar-shingle roofs—the pioneer tradition that is seeing brilliant latter-day evolution in contemporary work. Design was anonymous, the simple expression of a sincere and modest pioneering people. Sawmill and shops were built of heavy mill construction of wood posts and beams, giving Seattle an esthetic homogeneity it would never see again.

Built soon after The Great Fire of 1889, the Pioneer Building, at the northeast corner of First Avenue and Yesler Way—site of the original Yesler sawmill—was an attempt, through employing Romanesque-Richardsonian influences, to produce the dignity and worldliness for which the new Seattle was striving. Photo: Leggenhager

The Cascade Hotel (left), though a stylish derivative, shows a willingness to experiment that was typical of the burgeoning city. Vertical column areas are minimized, and windows occupy the entire space between them.
Photo: Leggenhager

This Victorian apartment house (right), built in the Eastlake District around 1890, displays a remarkably adept use of large glass areas, combined with the then-fashionable ornateness. Compare the general design approach with the contemporary apartment group on page 34. Photo: Chas. R. Pearson

"By 1880," the guidebook comments, "Seattle had a population of 3,500, and was the largest of many mill towns on Puget Sound. . . With the changing pattern of new wealth came the changing pattern of a new and exuberant architectural style. Ostentation expressed itself in complicated forms and lavish ornamentation of Victorian Gothic and Queen Anne. Social prestige was achieved by grandeur expressed in towers, porches, dormers, bay windows, colored glass, scrolls, brackets, fretwork, fancy-cut butt-shingle patterns on gables and sidewalls, *ad-infinitum*."

In 1884, the Northern Pacific Railroad pushed through to Seattle, bringing new markets and communication to the community—a bustling center that was largely built of wood. In 1889, the local Great Fire destroyed 60 blocks, including

the entire business and commercial district and the wharves. The following day, town leaders met to plan the future and voted to widen and straighten streets, improve grades, and rebuild of fireproof materials. While the city was rebuilding, new residents arrived by thousands. In August, 1894, the Washington State Chapter, A.I.A. was granted a charter, with 21 architects in Seattle and 14 from other Washington towns. Self-conscious symbols of the new prosperity appeared in imported architectural styles—Romanesque, Gothic, Renaissance, Georgian.

"Ships returning with gold from Alaska in the summer of 1897 touched off the rush of fortune seekers," the guidebook tells us. "Aggressiveness of the Seattle community and its merchants established the city as the fitting-out place. As business grew, so did architecture, with eastern firms contributing buildings as well as young men to Seattle. In the midst of the traditional work, it is important to call attention to at least three young architects at this time of whom it might be said that they cried in the wilderness. Ellsworth Storey came to Seattle in 1903 and did original and creative work appropriate to the region and the times *(see below)*. Andrew Willatsen arrived a few years later, fired with the zeal of Sullivan and Wright; his work was scorned by his colleagues *(below)*. W. R. B. Willcox, arriving in 1908, brought a clarity of understanding of architecture and the arts to the community which was to influence the next generation of architects, if not his own. Later he became head of the School of Architecture at Eugene, Oregon."

The Columbian Exposition of 1893 in Chicago introduced architectural "respectability" to the country as a whole. Seattle's Alaska-Yukon-Pacific

On this page are shown examples of work by two of the most remarkable architects who worked in Seattle in the early years of this century. The cottages at Colman Park (below) were built in 1908. Ellsworth Storey, the architect, went to Seattle in 1903 and consistently did original and creative work appropriate to the area—"a voice crying in the wilderness."

Another unsung hero was Andrew Willatsen, who went west imbued with the philosophies of Sullivan and Wright. Witness the residence in The Highlands (right), built in 1909.

Photos: Leggenhager
Chas. R. Pearson

Exposition of 1909 reinforced the trend in the Northwest, where John Galen Howard of Howard & Galloway, San Francisco, used classic forms exclusively. The University instituted a Department of Architecture in 1913, and Bebb & Gould, the University architects, accepted Collegiate Gothic as appropriate.

In the period starting with the outbreak of World War I, commercial and public buildings evolved from the earlier eclecticism to a pattern of formal plans and carefully detailed facades. Then, in the 1930's, a more economical and simplified architecture emerged. Warehouses and industrial buildings were bare, direct structural expressions, with occasional distracting efforts at prettiness. During this time, architects and engineers began to work in closer relationship, as mechanical requirements multiplied, and need for more consistent structure became obvious. Government priming in public work helped relieve the burden of the depression. Then World War II again changed the building scene. Architects took government jobs or struggled under priority limitations in private work. Several large firms were instituted to handle war jobs and stayed on to plan post-war projects.

"Since 1946," the guidebook reports, "only the conservatism of clients forced eclectic work, with all firms anxious to do creative work." In this period, there was widespread growth of domestic architecture for the middle- and lower-income levels, through builder-developer projects that extended the original gridiron city pattern without regard for hills and waterways. Some architects still built stylish mansions for wealthy individual clients, and a few even ventured into Swiss and Scandinavian stylism, which, in wood use and broad protecting roof overhangs, at least was more appropriate to the region. Much of the residential work was a translation of Colonial and Cape Cod formulas, and not a little work proceeded in the strong, continuing western tradition of simple, low houses and bungalows. More and and more, however, individual architects experimented with new forms, producing provocative work. Though the University taught under the Beaux Arts system until World War II, many graduates were feeling their way toward the new architecture.

After the war, as materials flowed back into civilian production, residential building really boomed. Traditional styles were forgotten—except by lending agencies, builder-developers, and a few clients. Young new firms gained national recognition for the outstanding equality of their contemporary work.

The world's largest floating bridge, Lake Washington (1940). Concrete pontoons anchored to lake bottom, with certain units arranged to swing aside to allow passage of boats. State of Washington Highway Department, Engineers; Lloyd Lovegren, Architectural Consultant. Photo: Leggenhager

In this house at Bothell, Wash. (right), *Paul Hayden Kirk, the architect, employed native wood simply and directly; the deck for outdoor living echoes the relatively mild climate.*
Photo: Dearborn-Massar

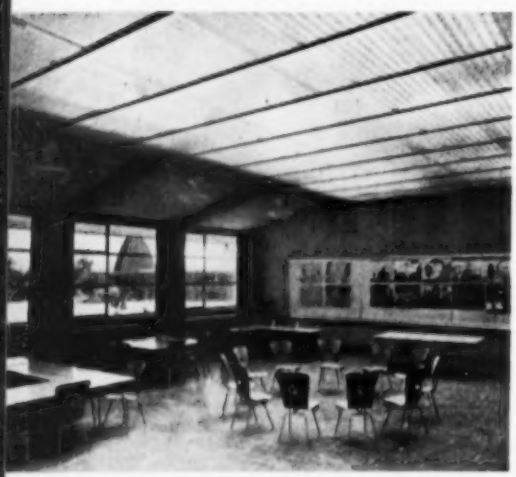
The windowless street exterior of the architect's own home in Seattle (right) *belies the complete openness of the garden side (1950). Natural wood is combined with industrial materials; accents of bright color. Victor Steinbrueck, Architect.* Photo: Dearborn-Massar

Although this house (below) *is in the city, its plan provides country-like outdoor living in a protected garden court, bordered by window walls (1949). Tucker, Shields & Terry, Architects.*
Photo: Dearborn-Massar

NORTHWEST **current work**

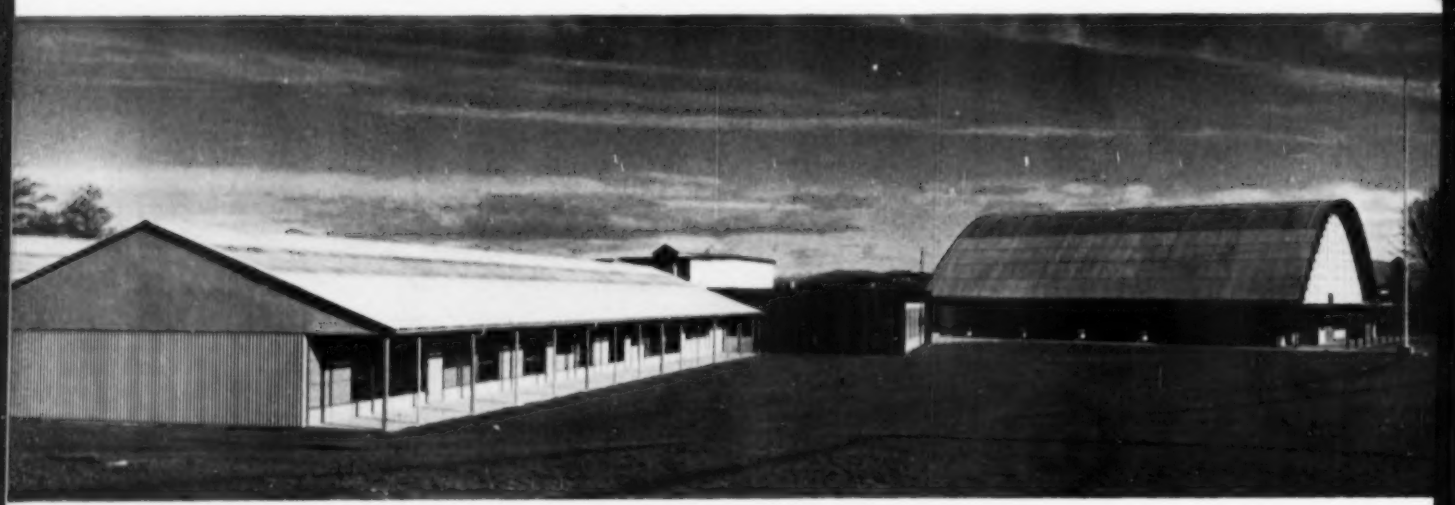
The window wall of this house at Hunt's Point (right) *makes the most of the lake and garden view (1950). Paul Thiry, Architect.*
Photo: Richard Garrison

Yesler Terrace Housing Project (right); *Aitken, Bain, Jacobsen, Holmes and Staddard, Architects (1941). The first Federally sponsored, low-income, slum-clearance housing project in Seattle is located on the site of one of the city's earliest residential developments. Each dwelling unit has a private, sitting-out area and yard and, through terrace site-planning and flat shed roofs of surrounding buildings, enjoys a dramatic view.* Photo: Dearborn-Massar



Both the Southgate Elementary School; (1950) and the Foster Junior-Senior High School (1952) are the work of Architect Ralph Burkhard (left and below). *Structural elements and equipment appear in the finished design, made up of elementary forms with a nice scale relationship between them.*

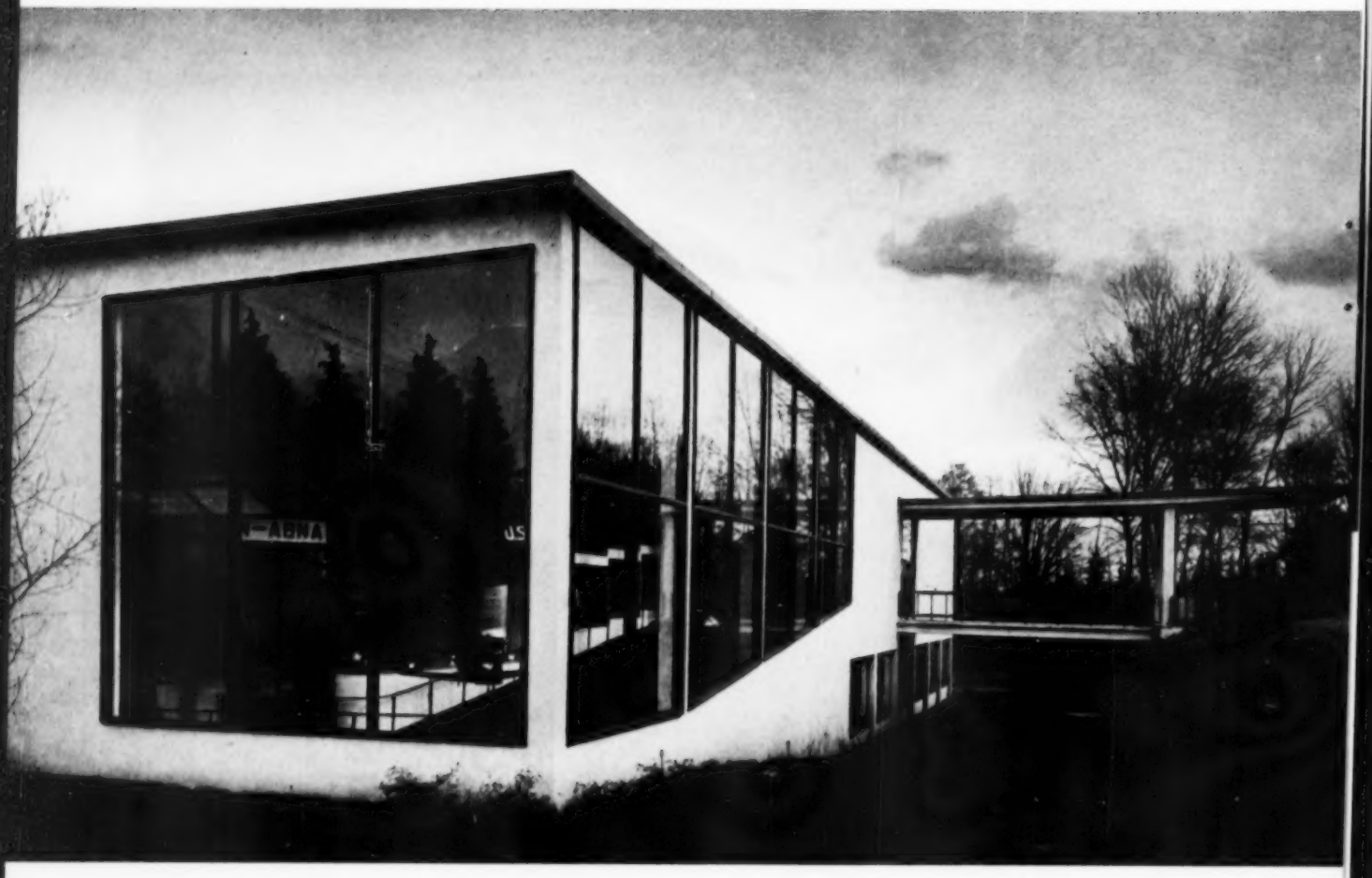
Photos: Dearborn-Massar
Chas. R. Pearson



Memorial Stadium for a Seattle High School is of reinforced concrete with flat-slab and upset cantilevered beams supported on posts (1948). Design venturesomeness is a Seattle tradition. George Wellington Stoddard, Architect. Photo: Dearborn-Massar

The Seattle firm of Natamore, Bain, Brady & Johanson designed this 300-bed Veterans Administration Hospital, Seattle (1948). Patients' rooms all face southeast overlooking a recreation area and enjoying a distant view of Mt. Rainier. Structure is the basis of the finished design expression.
Photo: Dearborn-Massar

The Holly Park Community Center, built of brick (1943) is a playful composition of related basic forms. Jones, Ahlson & Thiry, Architects. Photo: Dearborn-Massar

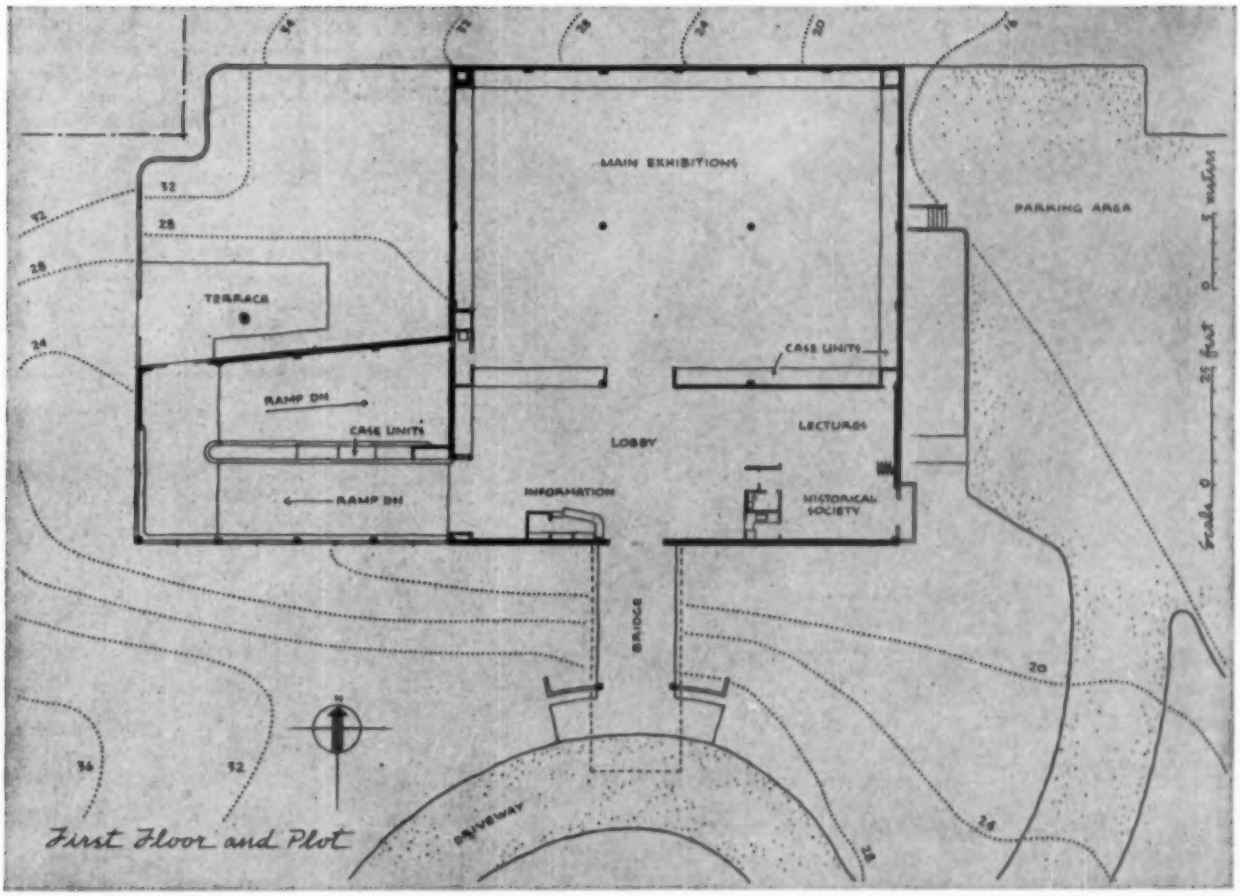


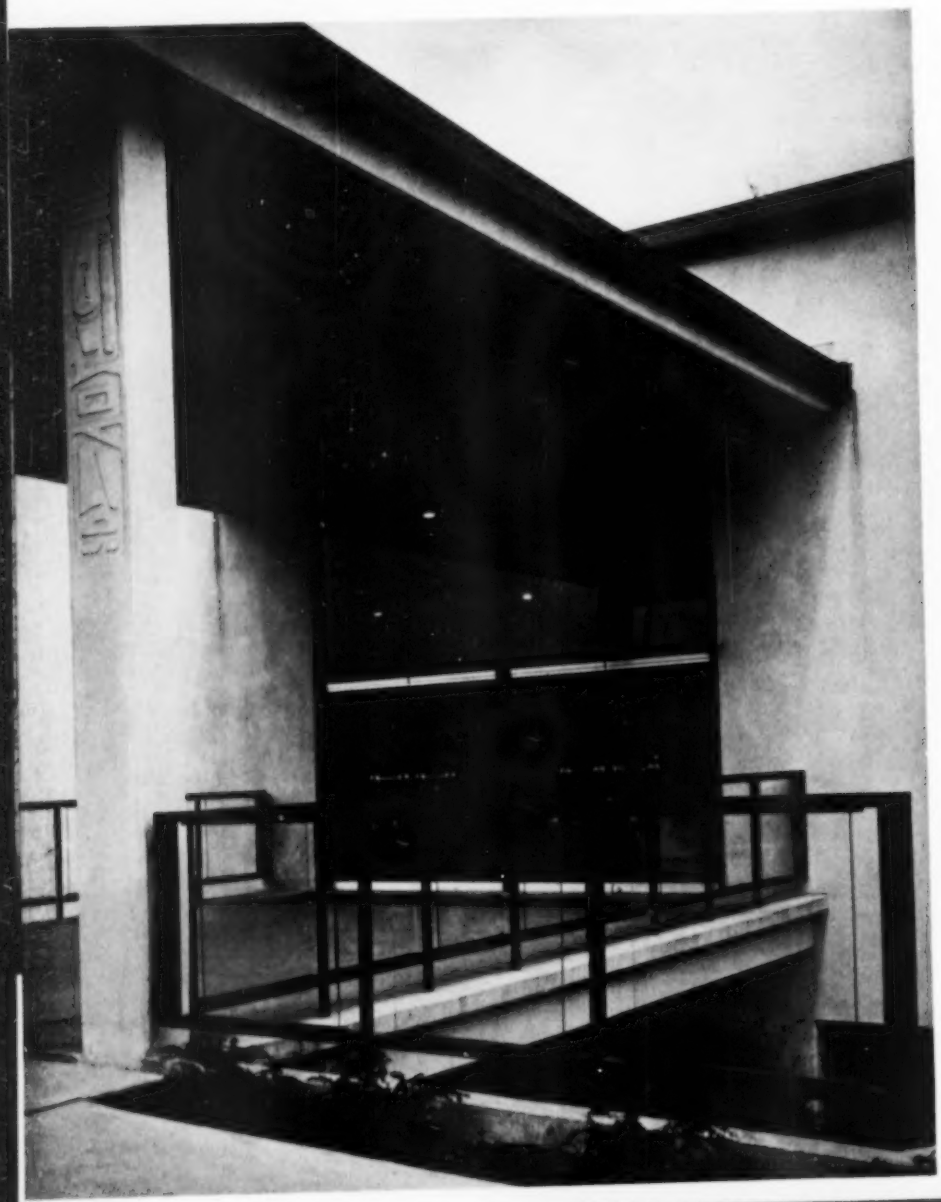
museum

location	Seattle, Washington
architect	Paul Thiry
structural engineer	Sigmund Ivarson
mechanical engineers	Bouillon & Griffith
electrical engineer	Beverly Travis
general contractor	Kuney-Johnson Construction Co.

An unusual set of factors conditioned the design of the Museum of History and Industry. The program itself was exceptional—a museum to house both historical and industrial exhibits. Then, a special requirement was that a gift of $50,000 from the Boeing Aircraft Company be used to construct a wing to display Boeing's first flying boat—the B-1 of 1919, an all wood plane that carried the first contract international mail between Seattle and Victoria, B. C. Far from the least extraordinary factor was the typically irregular Seattle site donated by the City, which included the dried-up channel of a former small-craft canal.

The dual nature of the museum is curiously appropriate to Seattle, since the arrival of the white man in the '50s and the start of the community's industrial development were simultaneous. The plan solution consists of assigning the historical museum, along with the Historical Society lounge, to the upper floor; and industrial exhibits to the lower floor, the abrupt site slope allowing above-grade conditions at both levels. To satisfy the need to build a "wing," the architect worked out the ingenious ramped passage between upper and lower floors, the flying boat being suspended from the ceiling above the turning. The entrance bridge straddles the old canal ravine. On the lower level are a children's museum, a library, offices, and workrooms.

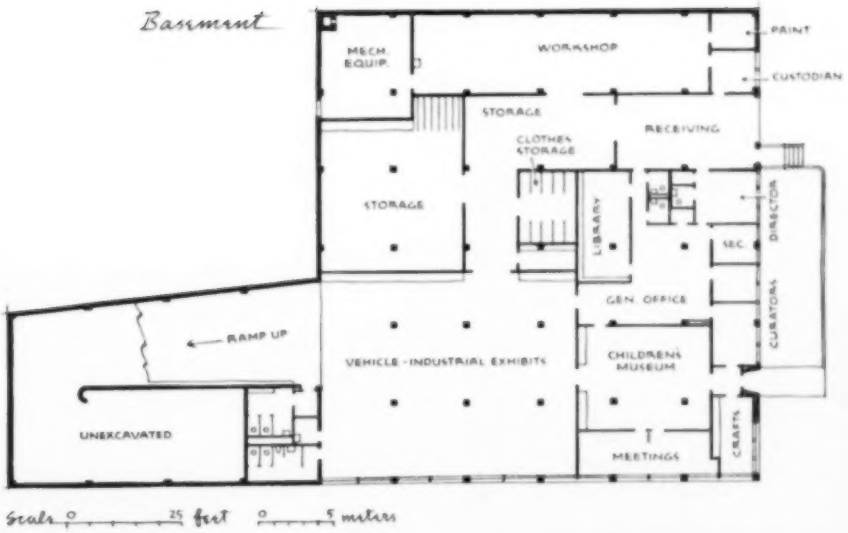

MAIN EXHIBITIONS
PARKING AREA
TERRACE
RAMP DN
CASE UNITS
LOBBY
LECTURES
INFORMATION
HISTORICAL SOCIETY
BRIDGE
DRIVEWAY
Scale 0 25 feet 50 meters
First Floor and Plot

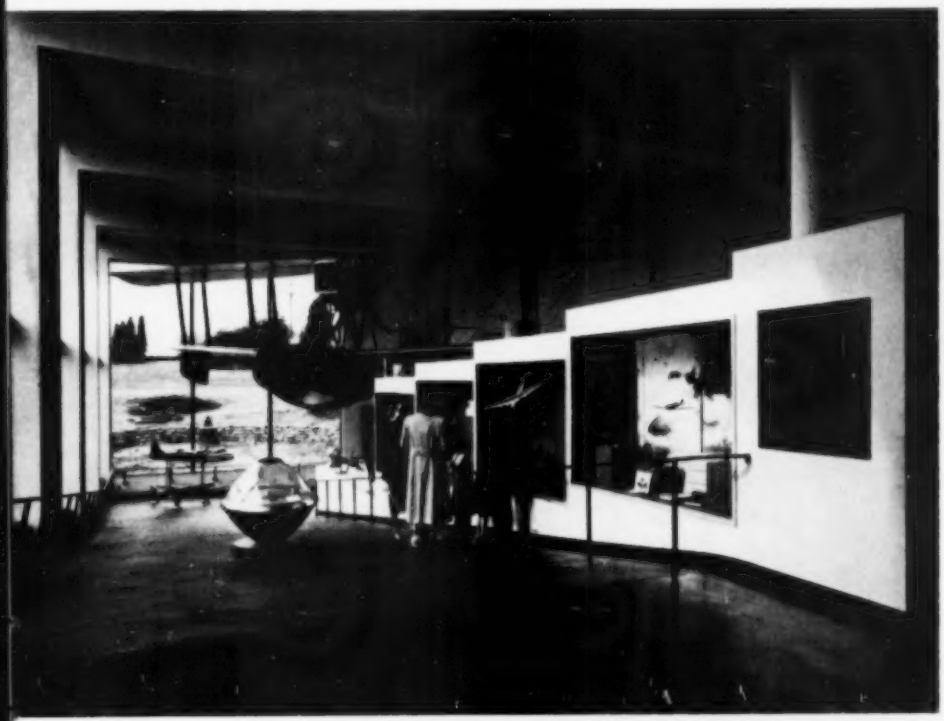


The railing at the entrance bridge consists of an iron frame and panels of ⅜" tempered-plate glass. The architect-designed incised reliefs on the canopy posts were inspired by Northwest Indian art. The reliefs were shaped in the concrete with ¾" bandsawed plywood fastened to the forms prior to pouring. A similar decorative motif is used above the children's entrance.

Photos: Chas. R. Pearson

From the attendant's desk of the main lobby one looks toward the ramp, with the historic Boeing mailplane in the background; at right of photo is the jamb of the door leading to the historical exhibition hall. The concrete floor is stained and waxed.





Industrial and civic displays are allotted the lower gallery (above). Items subject to damage because of temperature change, light, etc., are shown in glass-enclosed, tube- or incandescent-lighted wall cases; while freestanding exhibits in the middle of the gallery offer complete flexibility for changing displays.

The ramp surface is scored to prevent slipping; heat-absorbing glass is used on south and west walls. Display cases hold additional aircraft items, and an old Seattle cable car appears to be starting uphill from the lower level. Since the building is serviced by electric-lift truck that maneuvers the ramp with ease, an elevator was not needed.

The upper-level main gallery (top) is artificially lighted and mechanically ventilated. The center is clear space for freestanding objects, cases, or staged displays (the exhibit of Seattle's Bon Marche department store, for example).

construction

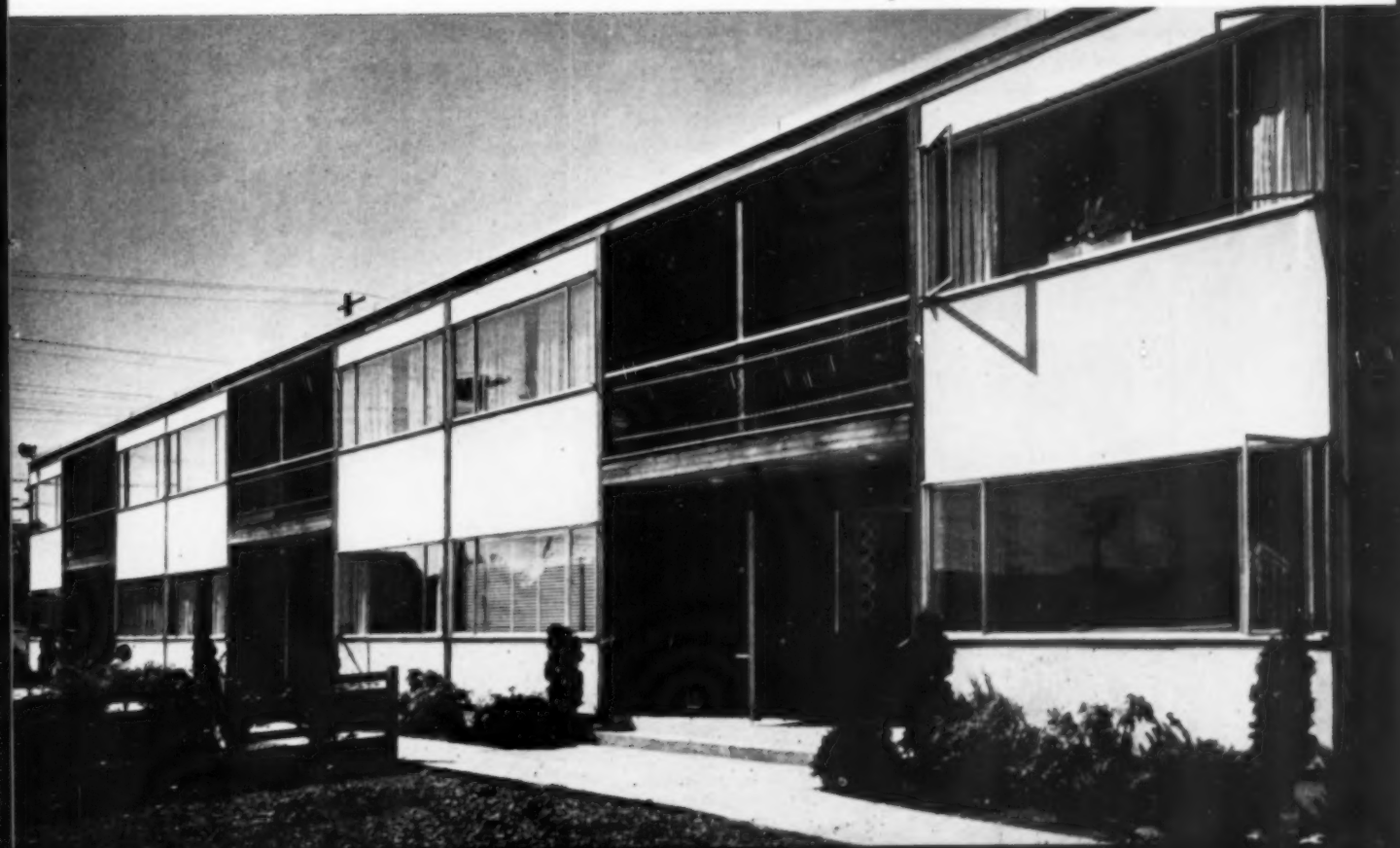
Foundation: concrete with spread footings. **Frame:** reinforced concrete. **Wall surfacing:** exterior: resin-base paint—Armor Laboratories; interior: plaster; rest rooms, toilets: ceramic tile. **Floor surfacing:** stain and wax. **Ceiling surfacing:** plaster, putty coat. **Roof surfacing:** 5-ply asbestos-felt built-up roofing—The Philip Carey Manufacturing Co. **Insulation:** perforated and unperforated fiberboard—National Gypsum Co. and The Flintkote Co., Building Materials Division. **Partitions:** plastered steel studs—Penn Metal Co., Inc. **Windows:** aluminum sash—Tecler Aluminum Co.; plate glass: regular and heat-absorbing—Pittsburgh Plate Glass Co. **Doors:** interior: hollow-core, slab; folding overhead—Richard-Wilcox Manufacturing Co.; entrance: vertical steel, rolling—Kinnear Manufacturing Co. **Hardware:** lock sets—Schlage Lock Co.; door closers—LCN Closers, Inc., Dor-O-Matic Division of Republic Industries, Inc., Yale & Towne Manufacturing Co.; hinges—The Stanley Works. **Paint, stain:** resin-base paint—Armor Laboratories.

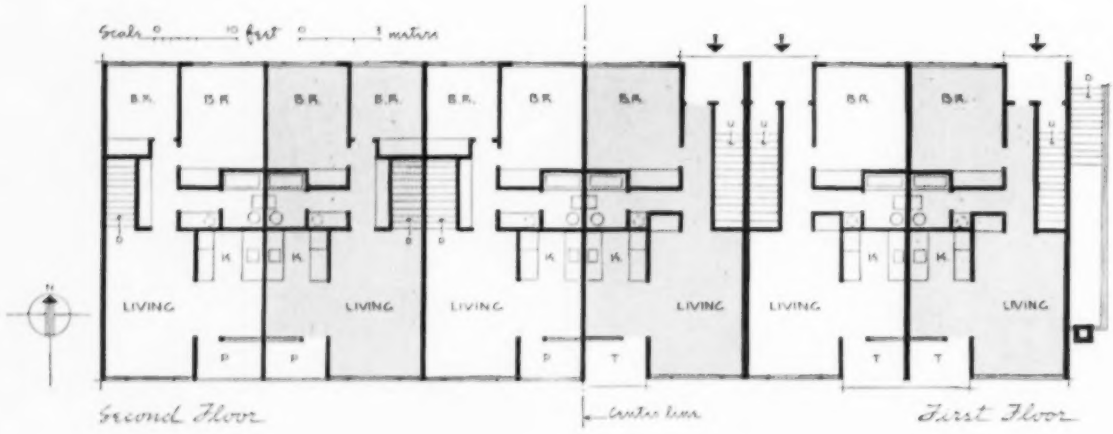
equipment

Lighting fixtures: offices: concentric-ring type—Silvray Lighting Co.; storage area: reflector—Smoot-Holman Co.; display area: recessed adjustable—Swivelier Co., Inc. **Electrical distribution:** service entrance switch and panelboards: circuit breaker types—Trumbull Electric Department of General Electric Co.; cable—General Cable Corp.; wiring devices—Bryant Electric Co. **Plumbing and sanitation:** lavatories and water closets—American Radiator & Standard Sanitary Corp.; toilet seats—C. F. Church Manufacturing Co.; flush valves—Sloan Valve Co.; accessories: drains and hose bibs—J. A. Zurn Manufacturing Co.; galvanized-steel pipe—National Pipe Bending Co.; wet-pipe sprinklers—Grinnell Co., Inc.; drinking fountains—The Halsey W. Taylor Co. **Heating:** radiant and forced-air types: steel boiler—The National Radiator Co.; galvanized-iron ducts; controls—Minneapolis-Honeywell Regulator Co. **Air conditioning:** blowers—Western Blower Co.; 5-ply filters—American Air Filter Co., Inc.

apartments

location	Seattle, Washington
architects	Bassetti & Morse
associate architect	Wendell H. Lovett
engineer	Harvey Johnson
general contractor	C & B Builders





Even within the frequently rigid design limitations imposed by local FHA offices for loan approval, some architects manage to produce confident and imaginative architecture. Such an instance, we believe, is the 608 apartment block shown here—simply stated, nicely proportioned, well oriented—with a pleasing counterpoint of openness and enclosure; light and dark; smooth and textured surfaces. The building won second place in the commercial category, in the Washington State A.I.A. 1951 contest for architectural excellence.

As the architects state it, "the program was simple—to design a 608 apartment house to suit the lot and to have maximum occupancy and minimum cost without sacrificing decent standards of living."

Clean as the design is, they feel that they could have accomplished something even more efficient—and more interesting looking—if they could have used an exterior balcony along the north wall for access to upstairs apartments. However, FHA vetoed this. As a result, all units, though they occupy the full depth of the building, must be entered by hallways and stairways. Also, to make most economical use of cubage, the one-bedroom units had to be relegated to the first floor, with all two-bedroom apartments upstairs—a feature the architects regret, since they feel that direct access to garden and playground is particularly desirable for families with children.

Accommodated to the long, gently sloping site, the symmetrical plan is organized within a plain rectangle, with one of the narrow ends toward the street on the west. All entrances occur along the north side, as do the bedrooms, lighted by long, narrow aluminum sash, with a fixed central panel and operable casements at either side. These, in conjunction with the large window areas and doors on the south or garden side, provide cross ventilation for all apartments. Wall surfaces on the south are asbestos-cement panels, while elsewhere, stained vertical T & G siding of cedar (one of the handsomest and most time-honored of local materials) is used. A small basement, beneath the eastern third contains boiler room, laundry, and tenant storage room.

The structural system is standard, platform, frame construction, selected for cost economy; interior walls are finished with plasterboard. Flooring throughout is either hardwood or linoleum, and ceilings are plaster on lath. For sound control, walls between apartments are insulated, and there is also sound insulation between the first and second floors; wool-type insulation is used for thermal correction. All sash are aluminum, as is the roof fascia. Doors are flush-panel type. The building is heated by an oil-fired, hot-water system, employing baseboard convectors.

The kitchen-dining unit is typical for all twelve apartments. The kitchen area itself is shielded from the living space by a wing partition.

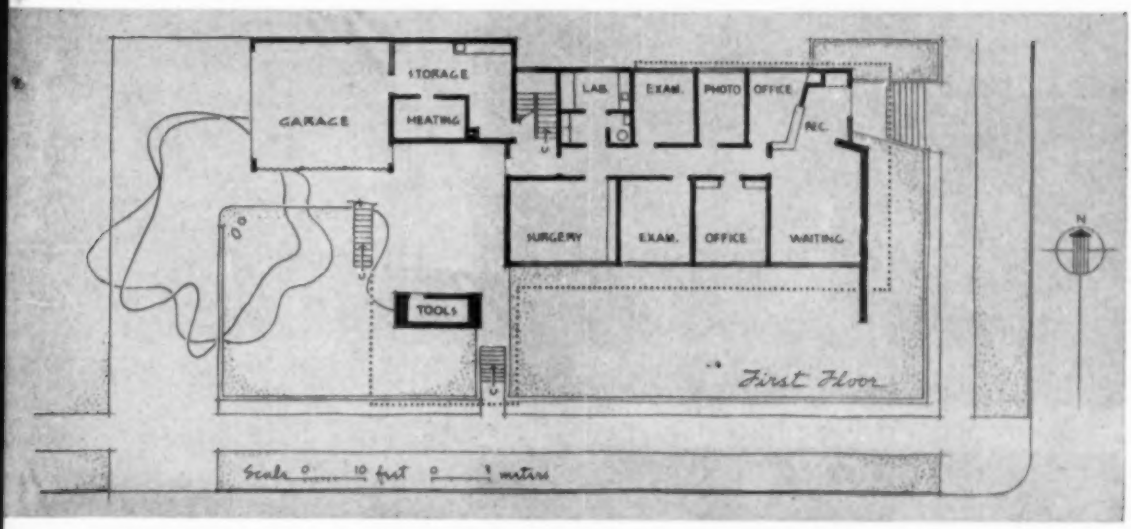
Photos: Dearborn-Massar

Each apartment has a private, outdoor sitting area reached by a door between the view window of the living room and the dining corner (right and below), *not unlike the planning of the 1890 apartment shown on p. 72. Downstairs, these are small terraces; upstairs, porches, with wire-mesh handrails.*

In the upstairs apartments, the corridor leading back to the two bedrooms (right) *is bordered by storage closets, with sliding doors. A small basement occurs beneath the eastern third of the structure and contains the boiler room, a laundry, and a tenant storage room.*

clinic-residence

location	Seattle, Washington
architects	James J. Chiarelli and Paul H. Kirk
structural engineers	Stevenson & Rubens
mechanical engineer	C. A. Pangborn
general contractor	Olav Boen



This clinic-residence rejects any stylized form and exemplifies the dynamic energy of the Northwest. Seattle, once a stronghold of a Gothic-Revival tradition, arose as one of 16 Pacific Coast mill towns. When prestige demanded an elaborately rococo mansion, the only limitations were those of degree. But in the shadows of a style replete with historic association, Architects Chiarelli and Kirk here archieved a significant, yet unpretentious, treatment of two functions— a plastic surgery clinic and an apartment. Their fundamental problem was ". . . to divorce the apartment from the clinic in perspective and orientation." The clients' comment that in ". . . walking upstairs, the clinic and its problems are left behind," is evidence of successful handling.

When the Great Fire of 1889 destroyed the wharves and commercial districts of the city, the use of wood was immediately restricted. Despite dictates of style then, fire (and sometimes earthquakes) initiated new structural thinking.

Cantilevered on two steel girders, the apartment commands a view of metropolitan Seattle and the Olympic Peninsula. On the open west, elevation, three-inch aluminum columns are the structural supports for the composition roof. These members, whose strength had to be proved to skeptical building authorities, are counterposed against pink Roman brick and white stucco, accenting texture and color contrasts.

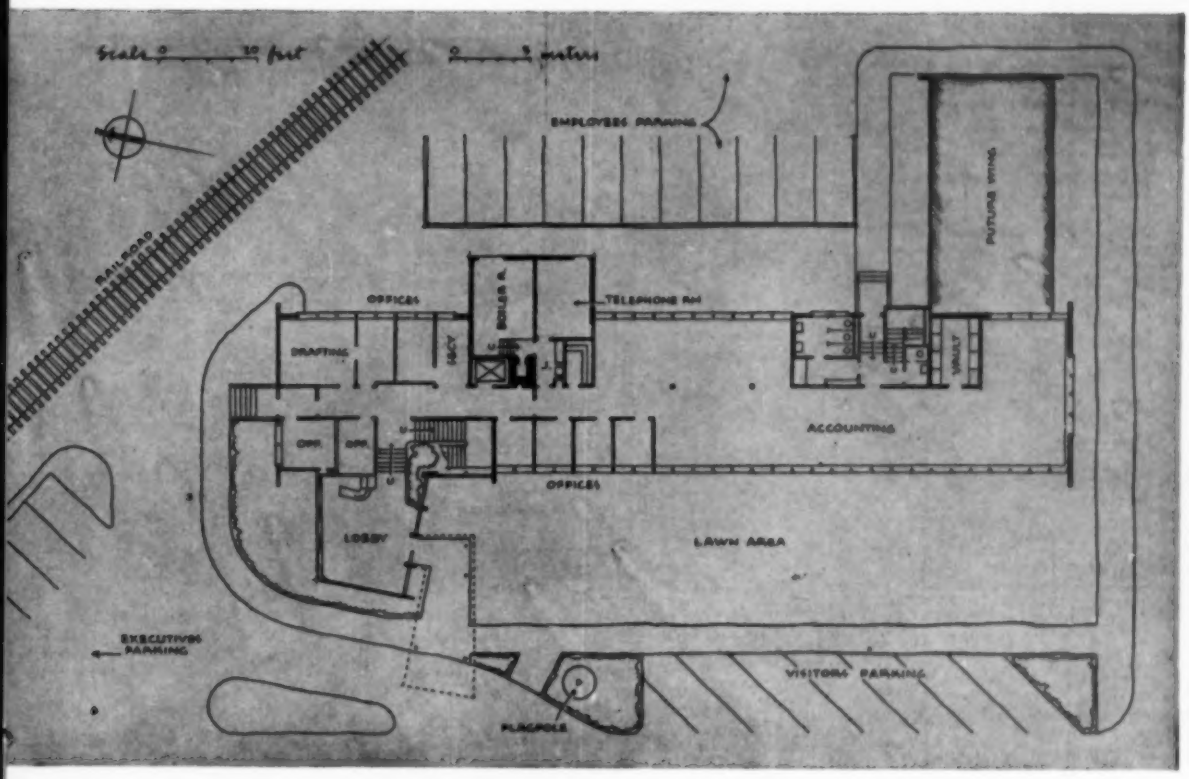
Below, the clinic, absorbing the sunlight from the south, looks in the direction of the County Hospital. It rests on a concrete slab, and heating coils are used in the floors and ceiling, with wool-type bats to insulate walls throughout. "Were it to be redone," say the architects, "the ideal system for the comfort of the nurses would be radiant ceilings with conditioned air." And within, African mahogany plywood for the paneling and cabinetwork blends into the richly-muted harmony of beige and off-white wall colors. Easily maintained surfaces of parquet and rubber-tile floors, painted-plaster walls and ceilings, aluminum hardware, and recessed incandescent fixtures evidence the apparent simplicity of living and absence of display. The design of the clinic-residence seems to reflect the unique patterns of contemporary life in the Northwest.

Entering patients pass reception area to waiting room finished in African mahogany veneer and Roman brick (left). High level of light is maintained in the surgery by neutral shades of beige and off-white combined with recessed, incandescent aluminum fixtures (above).
Photos: Dearborn-Massar

Second-floor apartment and small terrace overlook metropolitan Seattle and Puget Sound (right and below). *The three-inch aluminum columns of the window wall are capable of carrying more than four times maximum roof load imposed.*

office building

location	Olympia, Washington
architects	Naramore, Bain, Brady & Johanson
associate architect	A. E. Hennessy
supervising architects	Wohleb & Wohleb
structural engineer	George Runciman
mechanical engineer	Richard Stern
landscape architect	Beverly Travis
electrical engineer	Roberta A. Wightman
interior furnishings	Bon Marche Contract Division
general contractor	Cawdrey & Vemo



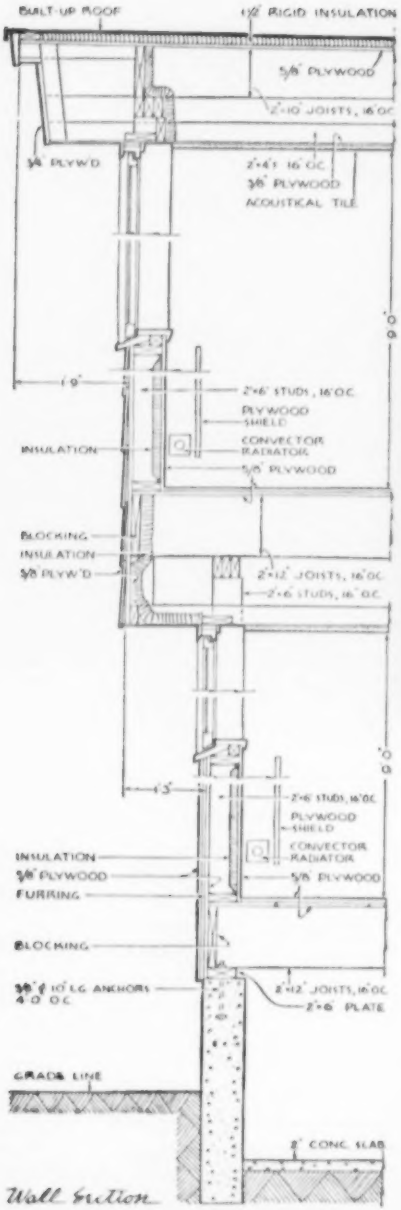
Using 120,000 square feet of plywood and 25 different interior wood finishes, this office building's primary emphasis in design was to exhibit the many and varied applications of plywood and lumber. Developed as an administrative supplement to the company, it houses the West Coast operations for a nationwide distributor. In a state in which lumbering is the principal industry, the architects felt it appropriate to employ the owner's product to best advantage.

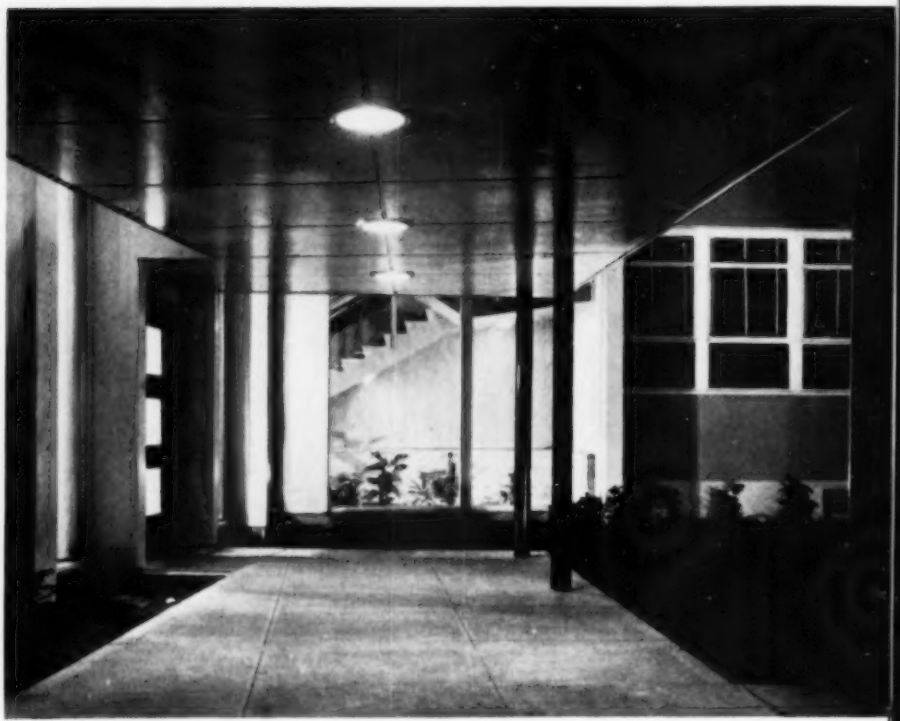
Since shipments are made by water, sawmills stand at the more accessible ports. This site is on waterfront fill, surrounded by company oil tanks, warehouses, and railroad spurs. The site is large enough to set the building back for approaches and landscaping; the architects considered a north-south orientation best for ideal illumination and for the future planning of an east wing. On the north, visitors, executives, and employes all enter through the display-reception area. Architects considered its placement "...to get a better perspective of the building and to permit the use of wood and the modular structure to be fully viewed." The four-foot module, by nature of its uniformity, permits application to any office arrangement and future expansion, still expressive of the office machines.

Since the owner's yard furnished all the structural framing material, this meant not only a large selection but also perfect stock with which to work.

Structurally, the framing of wood posts and beams is conventional. Emphasis was given to structural details planned to counteract effects of local seismic shock; double layers of $\frac{5}{8}''$ plywood were first glued together, then glued to the joists of the first and second floors. Familiar design details utilize plywood in every possible way. (See also the article on p. 94.) Everywhere, from soffits, finishes, and cabinetwork, to doors, desks, and wastebaskets, standard practice applications of plywood may be seen.

Exterior frame walls, sheathed in plywood with aluminum foil-blanket insulation, are finished in plastic-faced painted plywood. Interior partitions are stud, with soft and hard plywoods and paneling of western woods applied to them. Corridor walls use $\frac{1}{2}''$ plasterboard behind plywood; the space between is filled with a wool-type insulation. Interior millwork is of solid birch, except that rooms paneled in hardwood have matching doors and trim. The roof includes $1\text{-}\frac{1}{2}''$ glass fiber over $\frac{5}{8}''$ sheathing, all covered with composition roofing. Acoustically treated ceilings use perforated tile mounted on



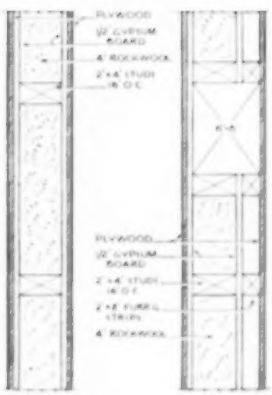


Interior garden and main lobby stairs are visible from beneath canopy of reception area (above). *West wall section* (left) *indicates multiple applications of lumber and plywood.* Photos: Richards

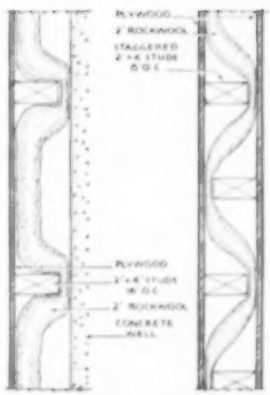
5/16" sheathing, and floors are surfaced with oak plank, asphalt and ceramic tiles.

Plant steam is supplied to a heat exchanger, and hot water is then circulated through the building to convectors and finned-pipe radiators. The lobby and main stairhall are treated with heat-absorbent plate glass; all other windows are wood sash with double-strength panes. Recessed and surface-mounted fluorescent fixtures and exterior floodlights are some of the 30-odd lighting mechanisms chosen for specific functions in this office-exhibition building.

Looking along plywood-paneled, second-floor corridor (right). *All interior millwork of solid birch.* (Typical wall sections at right, below.) *Close-up of Northwest Room, for company conferences, shows oldtime map of the region. Room adjoins the office of the senior vice president, and is separated from it by a folding plastic partition* (below).



Typical Corridor Walls



Soundproof Walls

plywood: recent developments

Figure 1—in the construction of this apartment building, plastic-faced plywood forms for concrete not only allowed greater reuse of the forms but also produced smoother concrete surfaces.

Figure 2—partitions between the lumber buyers' offices in the Georgia-Pacific Plywood Office Building are surfaced with plywood panels, to which thin veneers of knotty pine and birch have been applied. Even when more unusual veneers are specified (aspen, avodire, ebony, holly, koa, lauan, etc.), these panels can be afforded by those with relatively modest building budgets.

Plywood did not really gain wide acceptance as a building material until the hard-usage requirements of World War II demanded intrinsic improvements in this product that eventually raised its acceptance to unprecedented heights.

As everyone knows, a plywood panel consists of an uneven number of wood veneers with the grains crossed alternately—face veneers always running parallel with the length of the panel. Because of this type of lamination, the excess long-grain strength is transferred to the weaker cross-grain dimension, thereby developing an extremely high-strength-weight ratio when compared with ordinary wood. Also, because of the cross bonding of alternate plys of wood, plywood is a dimensionally stable material. Changes in moisture content affect plywood dimensions far less than wood itself and far less than many other materials. It is impossible to split plywood panels and nailing can be very near the edges. As it is usually cut in panels 4′ x 8′, erection is rapid and of low cost when compared with conventional wood construction.

In its early history, plywood was manufactured with vegetable, blood, albumin, starch, and other weak-type adhesives. During World War II and since, notable improvements in glues and manufacturing techniques have resulted in more durable panel materials. Thus, even interior-type panels, intended for inside structural applications, will resist occasional wetting—that may be encountered on roof decking or subflooring during construction, for example—even though the glues for interior types are not waterproof. The use of phenol-formaldehyde, resorcinol, melamines, and melamin-urea adhesives for exterior-type panels made in hot presses, produces a product that cannot be delaminated under any conditions.

For use as siding, wall sheathing, roof

* *Plastics Engineer, Georgia-Pacific Plywood Company*

by William A. Merigold*

sheathing, and subflooring, the FHA has set up permissible standards for stud, stringer, and rafter spacing for various thicknesses of plywood panels. These have permitted contractors greater freedom in the use of plywood and have produced large savings over the use of lumber and boards for the same purpose.

Rigid performance requirements have characterized the manufacture of fir plywood along the West Coast. These firms producing hardwood-faced plywood follow similar quality standards in producing panels faced with the southern woods, i.e. tupelo, gum, poplar, and others. Although these are equally allowable in the construction field, they are more often used in the furniture industry.

plastic-faced plywood

Born of necessity, this product represents one of the outstanding modern improvements in upgrading plywood to a new place of usefulness. Early in the war, the services had immediate need for tens of thousands of helmet liners. These were made of phenolic-impregnated canvas blanks, which were die cut to form the shape of the helmets and then baked over a form. Millions of pounds of left-over impregnated scrap were left, to be turned into a fortune if a use could be found for the scrap. One of the large paper manufacturers directed its entire research department to the solution of this problem. After a year, the researchers had developed a resin-impregnated fiber sheet which could be molded under heat and pressure. Two plywood manufacturers on the West Coast were persuaded to try its application on plywood and after a short period of acquiring the know-how, plastic-faced plywood was born.

Plywood surfaced with this material proved to be resistant not only to all kinds of weather but also to water absorption, abrasion, fungi, molds, alcohols, hydrocarbons, acids, and organic solvents. This development brought plywood to a new place of usefulness. Realizing its value, the services used millions of square feet of plastic-faced plywood for countless field-service items. After the war, when helmet-liner scrap was no longer available, impregnated-cellulose fiber was substituted, along with other improvements, to make this material even more valuable. It is used for plastic-faced concrete forms, where it has increased the reuse of forms and produced smoother surfaces (*Figure 1*); for exterior walls on houses and industrial buildings, as well as for paneling in dwellings, blinds, shutters, flush doors, kitchen cabinets; and many other interior and exterior uses. It saves the cost of painting and presents a smooth, hard, dense, amber-colored surface that refuses to wear out.

plastic-surfaced plywood for painting

Realizing that most plywood expands and contracts slightly with the weather and needs frequent painting, its manufacturers developed another type of plastic-faced fir plywood specially designed for any type of painting. This facing actually prevents cracking or checking on the surface, requires far less paint (due to the resin in the sheet), does not have to be painted as often, and is engineered for years of service. Its uses include outside siding, either large panels or lapped siding *(see Georgia-Pacific Plywood Office Building, page 90)*, and any type of interior fixture that requires painting. The plastic face of one brand contains latex, which is believed to give it superior quality. This material can be sawed, milled, or drilled without chipping the edges.

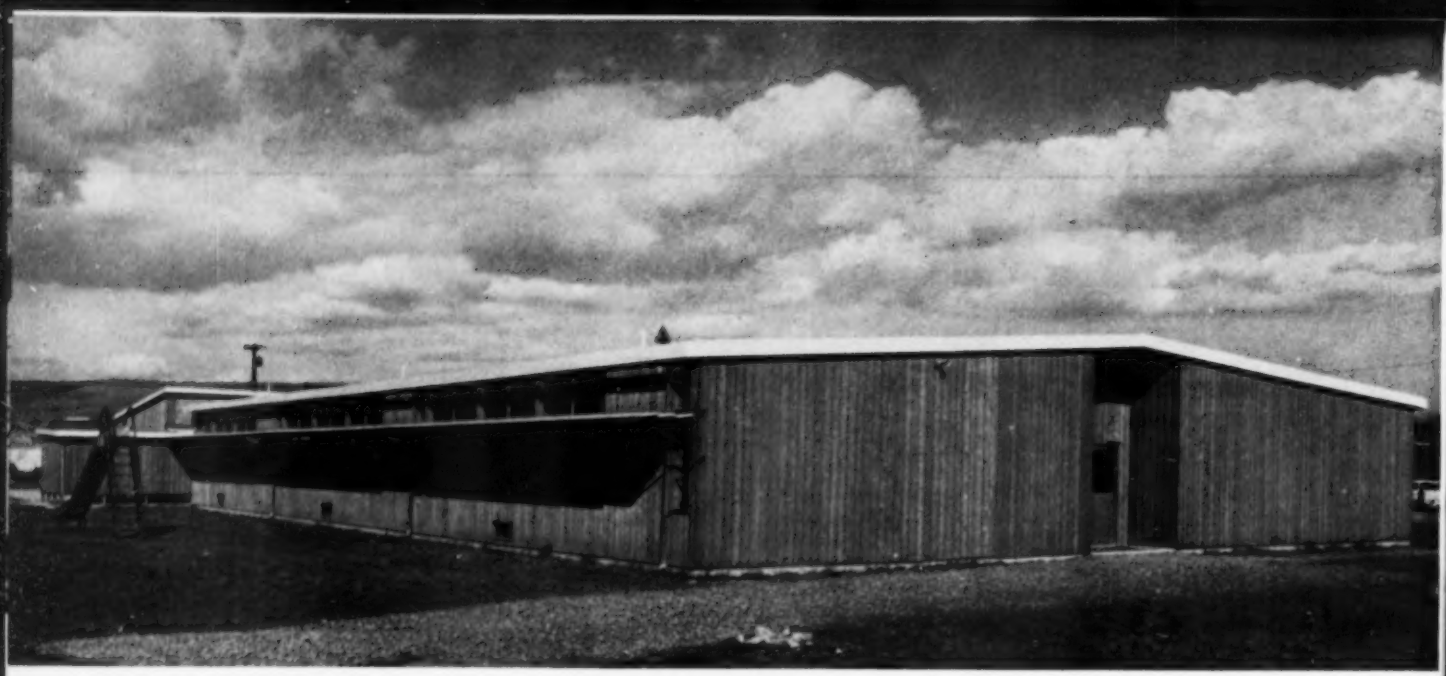
sculptured or brushed plywoods

Recently, many designers have preferred interiors with wood-paneled walls — as abundant evidence in the housing field shows. To satisfy this design requirement, real-wood textures on plywood (that would have been thought scarcely possible a few years ago) have been developed. One type is a striated panel on which vertical uneven lines are carved out by machine; another type has a design impressed on its face by means of an embossed platen; some panels have a pattern created by brushing out the soft wood with wire brushes—giving the hard wood a raised appearance; still others are of upland Western hemlock, with its swirls, burls, and tight knots brushed out to create the desired effect. Practically all use a two-tone finish. After a base coat of one color has been brushed on and dried, a second color is applied and immediately wiped, leaving only the higher grain in the original color. Many large housing developments have used these panels for entire rooms or single walls.

"fancy-faced" plywood panels

These panels may have either hardwood or fir plywood as a base. To the base, however, are applied very thin veneers of unusual woods, ranging from 1/28" to 1/80" in thickness *(Figure 2)*. Available veneers are amaranth, aspen, avodire, ebony, elm, holly, koa, lacewood, lauan, myrtle, oak (plain or combed), English oak, pollard oak, okume, pearwood, primavera, redwood, burl, rosewood, teak, tigerwood, tulipwood, walnut (American and Circassian), mahogany, and zebrawood. Plywood panels of ¼" to 5/16" thickness, with faces of any of the above woods, can be afforded by people building in the $10,000 to $15,000 home class. These owners can have just as fine a finish as if they had bought the old solid-wood type. No longer need these woods be used in solid panels so that they are only within the reach of those building $30,000 to $100,000 houses.

Most woods of this type can be had in the following grain patterns: plain, ribbon stripe, broken stripe, mottle, fiddleback, curly, birds eye, quilted, combed, quartered, rotary, burled, crotch, and many others.

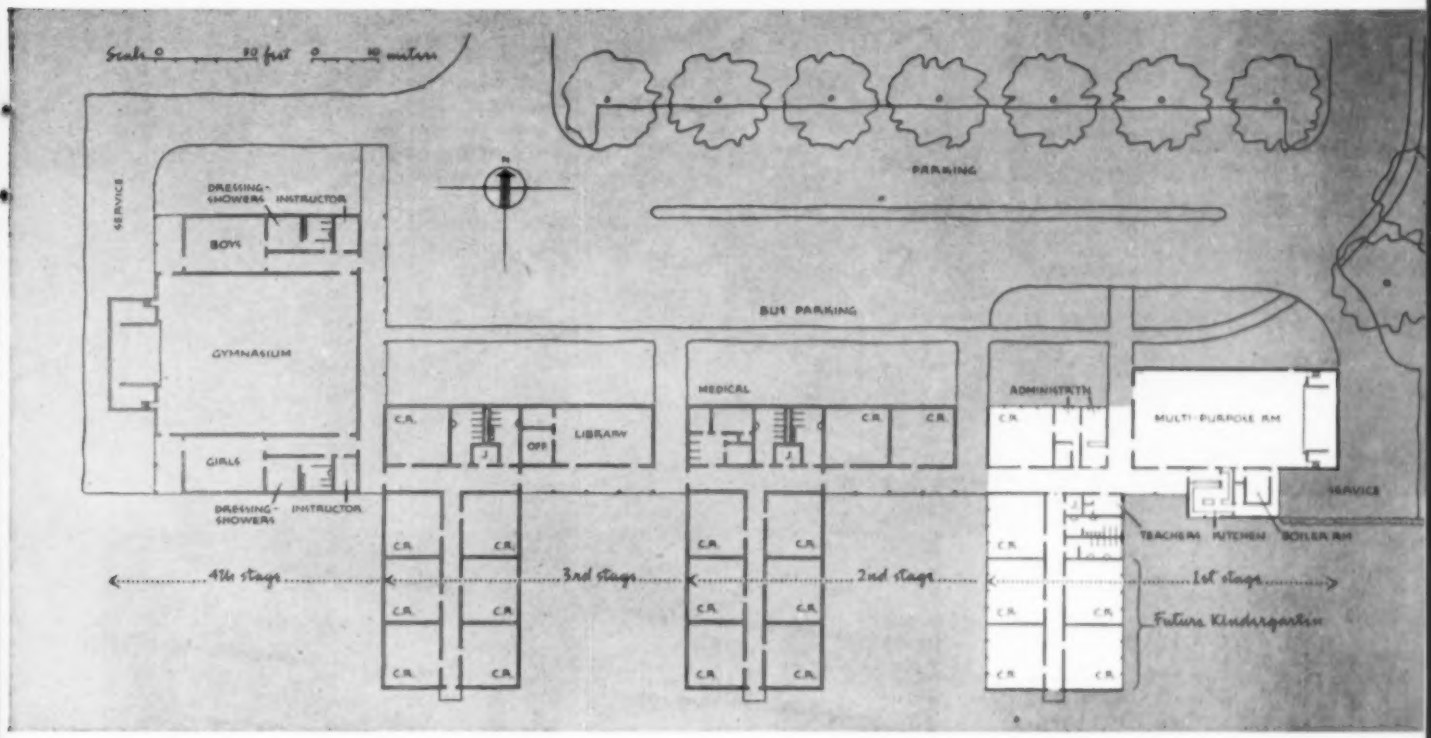


elementary school

location	Sheridan, Oregon
architects	Wilmsen & Endicott
engineers	Myers & White
general contractor	Foothills Construction Company

When the new wings are built, the classroom that appears in plan beside the administration offices will become additional office space; and the two classrooms east of the corridor will constitute the kindergarten.

Photos: Ackroyd Photography, Inc.
Carroll C. Calkins



Looking along the east wall of the classroom wing toward the multi-purpose unit (acrosspage), the three-part window detail is apparent—clear glass at the bottom; louvered outlooker; and obscured-glass top panel.

In the master plan, in the plan of the initial unit, in the materials used, and in finished design expression—this elementary school seems particularly appropriate to the Northwest, and especially to the Oregon coastal valley in Yamhill County where it is located. Not unusual in this area is a six-month period of winter rain, and there is a year-round prevailing wind that comes off the ocean and down the Coast Range from the west. In the master plan of the eventual school (18 classrooms accommodating 450 children from first to eighth grades), the classroom wings are aligned on a north-south axis and serve as shields for the courts. Even in the initial unit, a wing-wall is included to shelter the open corridor from the west. In the materials used—fir frame, exterior walls of cedar boarding, and interior finishes of plywood—one finds a roster of the area's prime local products. And in finished design, the completely unaffected handling echoes the straightforward work of the early tradition. All roofs slope—a proven device for carrying off abundant rain water.

The first unit includes a multi-purpose room; a double-loaded classroom wing,

The multi-purpose building (left and above) has a low wing on the south containing service rooms, cafeteria kitchen, and boiler room.

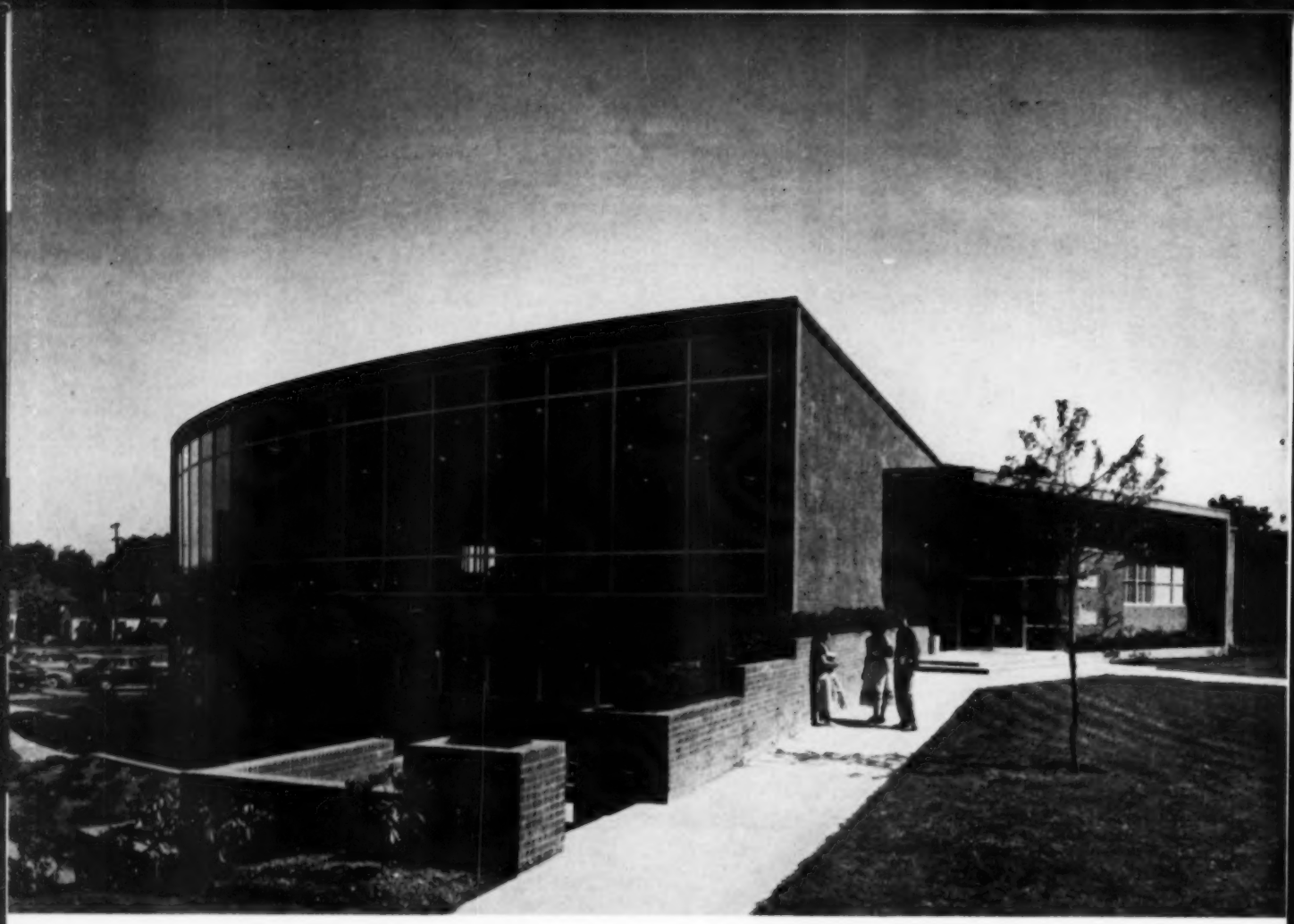
Exposed frame under the continuous corridor skylight (below) forms a dramatic pattern as well as helping to diffuse the light.

The window band along the top of the corridor wall of the typical classroom borrows light from the ridge skylight. Artificial lighting is incandescent throughout, with concentric-ring fixtures used in the classrooms.

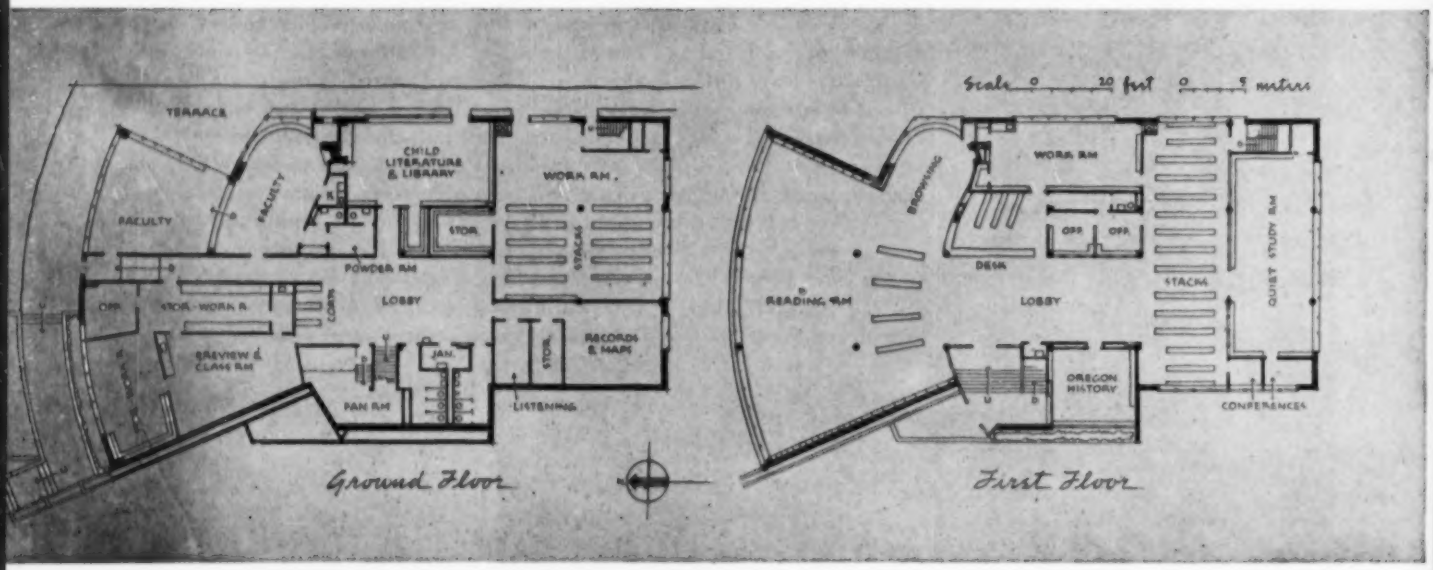
with rooms oriented east and west; an open access corridor; and, on the north side, a unit of accessory rooms. In the future additions, toilets will occur in the north unit, allowing six classrooms in each north-south wing. Classrooms receive bilateral lighting through corridor-wall clerestories that are lighted from a continuous, aluminum-framed skylight in the roof ridge. To break the direct sun angle and cope with sky glare, the east and west windows of the rooms have a lower portion of clear glass, shielded by structural outlookers, with obscured glass above.

The present multi-purpose room serves as cafeteria, small auditorium, and an enclosed and heated play shed. When used by adult groups in the evenings, there is no need to enter, heat, or light any other portion of the school. After the big gym is built, this multi-purpose room will be used solely by primary grades.

Design throughout was based on rigid economy and was worked out on a 16-in. module, for stud spacing, for application of 48" x 96" wood-fiber-base ceiling board, and for the 96" pre-glazed steel sash. The ceiling board is applied to 6" x 18" girders on 2" x 4" stripping, providing an air space for electrical conduit. The concrete-slab floors have an asphalt-tile finish. Counters throughout are surfaced with vinyl-plastic sheeting. The roof is insulated with glass-fiber rigid insulation and surfaced with built-up roofing. The heating system is low-pressure steam, with oil-fired boiler; unit ventilators occur in classrooms, while unit heaters serve the multi-purpose room. Construction cost, exclusive of architects' fee, land cost, or cost of classroom furniture, came to $6.42 per sq ft (counting the open corridor space as half).



college library



location	Monmouth, Oregon
architects	Wolff & Phillips
structural engineer	Leslie E. Poole
mechanical engineer	W. Bruce Morrison
electrical engineer	Geo. Pettingell, Grant Kelley & Co.
landscape architect	David E. Thompson
general contractor	E. E. Batterman

Regarded by the townfolk as "a notable departure," this library for the State Teachers College breaks the precedent of an existing traditional style on the campus. By its extraordinary expanse of glass, the main reading room (oriented north) enjoys ideal lighting. Yet, harmonizing with other campus buildings in material and scale, the building with its great curved glass wall and sculptural massing of the elements does not seem obtrusive. Even the sloping site proved well suited for the specific needs of the library (going from eight feet below the curb to a point level with it).

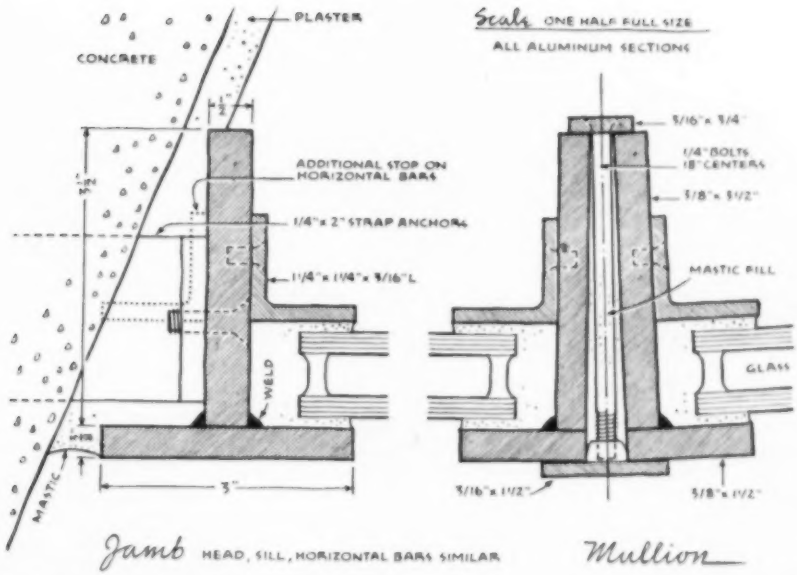
Of three schemes evolved, the one selected realizes the desired traffic control. Diverse activities within the building required that major emphasis be placed upon the reading room, stacks, offices, book-film-review, and classrooms. Particular attention had to be paid to a limited number of attendants needed for control. In the design, one person may simultaneously observe the entire reading room, stacks, and entrance from within the office. This grouping permitted the solution of several problems. Only half of the stacks were planned for the lower level, and a gallery-museum, a faculty terrace, and quiet-study area were included.

The architects surmise that enthusiastic public acceptance of the library stems from the quasi-monumental massing of brick and glass—suggesting to many the nostalgia of surrounding older halls.

Entrance, reading room, and stacks all may be controlled by one person from main desk and offices (right). *By placing half of the book storage below, space was made available for a quiet study on the main floor, adjacent to stacks* (below). Photos: Carroll C. Calkins

Due to the difficulty of obtaining high-priority steel for long spans, the roof, walls, and floors are of reinforced concrete. Since expansion was not an immediate consideration, the system could be used freely and give continuity to the structure. Brick with cast-stone trim was used for the uniform exterior treatment. A color scheme of deep plum shades and forest greens was chosen by faculty members, feeling that . . . "deep tones brightened rather than dulled," the lighting effect; harmonizing rubber and asphalt-tile floor colors then were selected.

Ceilings are light colored, treating the problem of noise by perforated acoustic tile throughout, except for the use of acoustic plaster in the main reading room. Interior partitions are of plaster-covered gypsum block, of steel, and of fabric applied to accordian-type folding units. Window sash are aluminum and employ double-insulated glazing; incandescent fixtures, designed to supplement natural light, are uniformly recessed. Completely air-conditioned and insulated by wool-type bats, the building is heated by a low-pressure steam system having strip convectors and transfer units.



Reinforced-concrete columns support the cantilevered roof slab. Continuous aluminum frame with double-insulated glazing provides ideal light for main reading room overlooking campus.

house

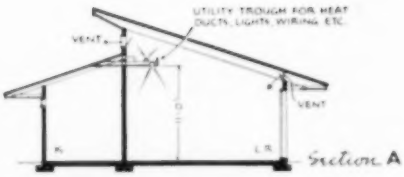
location	Salem, Oregon
designer	W. F. Severin
general contractor	James Minty

This disarming little house was planned as the first of two houses, with the idea that when the new unit became the parents' home, the house shown here would be used by their children. Built on an 80-acre Willamette Valley property that has been in the owner's early-settler family for 100 years, it makes direct use of local materials, as the pioneer work did, and has a simplicity and honesty that have nothing to do with ostentation.

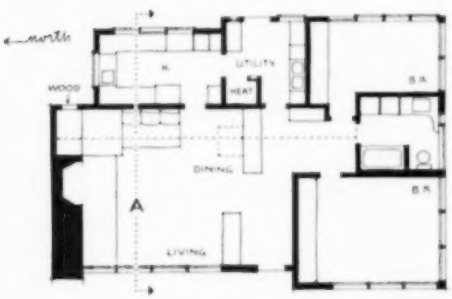
Entirely of dry construction—hemlock and cedar boards throughout—the structural system is organized on a 4-ft. module. All lights and vents are set into frames that are load-bearing, part of the working structure rather than applied. According to the designer, these frames gave him complete design freedom in both horizontal and vertical directions. The introduction of light through a ridge clerestory facing east was "a means and not a cliche," the designer explains. A dense grove is just to the east of the house, and "without the use of this upper glazing, entrance of morning light would be delayed." In section, notice how the screened vents in the deep western overhang, in conjunction with in-opening vents on this wall and casement is along the clerestory, provide cross-ventilation.

To an exceptional degree, this house realized the concept of joining indoors and outdoors—an inviting possibility in this area, where the climate is gentle, and nature lavish. Since the site is both extensive and secluded, such extraordinary openness could be employed without sacrificing privacy.

Photos: Carroll C. Calkins



Section A



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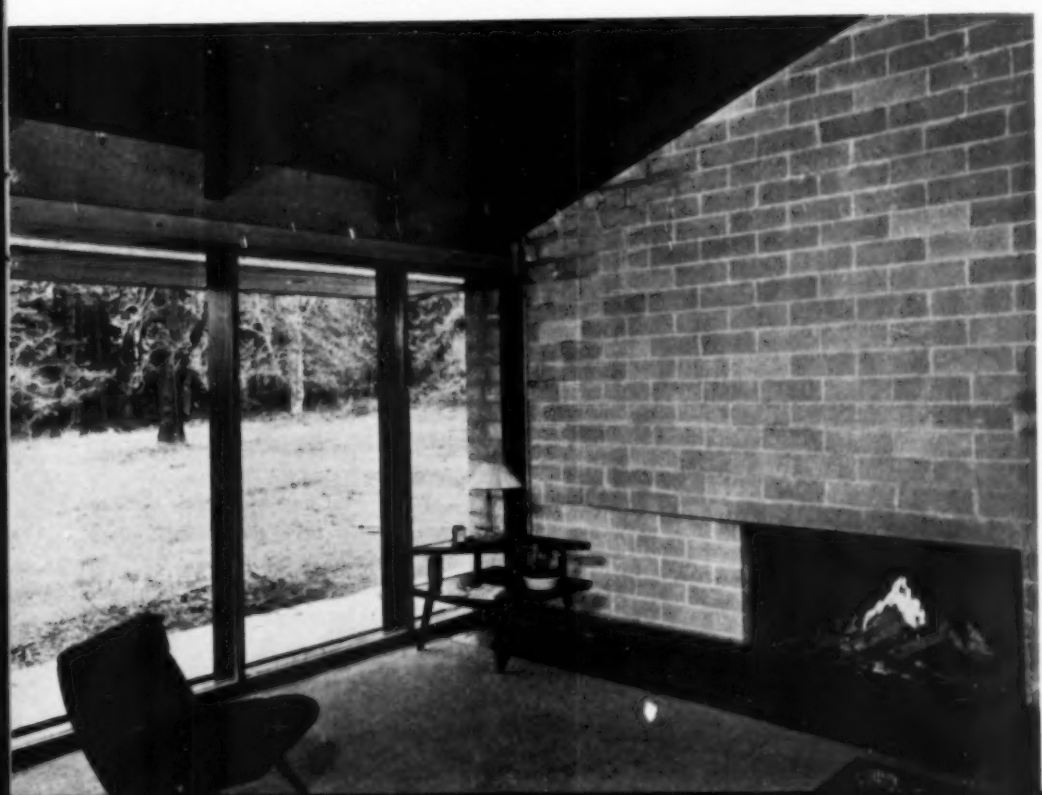


at last—A MAJOR ADVANCE IN GAS VENTING

by Alan Kinkead*

The venting of gas appliances finally has been placed on a sound scientific basis. The trial-and-error and rule-of-thumb concepts, the superstitious beliefs and conflicting regulations—all can be discarded in favor of a few fundamental principles and a logical set of rules. This development, of vast importance to the gas industry and the heating business, is the result of extensive engineering research.[1] The effect of this work will, in time, bring about standardization of code regulation, simplify the work of installers, and strengthen the competitive position of gas appliances in the home-heating market.

In the early days of gas heating, "out of sight" was "out of mind' with respect to the invisible products of combustion of gas-burning equipment. Many appliances were installed in the belief that any type of passageway from the appliance to the outdoors was adequate. In time, of course, rusted or crumbling vent pipes, damaged walls, and discolored furnishings brought about the realization that gas venting was a more complex matter than building a chimney for a fireplace. Slowly and haltingly, the gas industry began to seek ways and means of overcoming the two major problems of gas venting: condensation and spillage. A pioneer in this early industry-wide effort was Frank Wills, whose calculations were the starting point of the current study and research.

The first orderly attempt to solve these problems was a purely theoretical approach based on the physical laws involved in venting. Unfortunately, this theoretical work was not subjected to experimental analysis; a few invalid assumptions were made, and incorrect conclusions resulted. Later, an attempt was made to solve the problem by strictly experimental means, without regard to the theoretical laws involved. This effort was also doomed to failure and resulted in certain erroneous beliefs that have plagued the industry ever since. Among the incorrect conclusions drawn from this work was the statement that the materials of vent construction have little effect on vent capacity—this despite the obvious fact that heat loss *must* have some bearing on the matter!

Engineering research, recently completed, correlates the underlying theory of venting with scientifically-controlled experimental work. The fundamental laws governing venting were determined, then experimental work was performed to verify these laws and to evaluate any unknowns involved. An extensive amount of research work still is being conducted on this subject, but the work which has been completed clearly establishes the basic principles and rules which apply. We now know precisely why and how a vent operates and can point the way toward the establishment of proper standards and improved practices for the venting of gas appliances.

The first step in this work was a study of the underlying factors involved in venting. From accepted physical laws we know that the weight of a gas varies inversely with its absolute temperature: the hotter the gas the lighter its weight per unit of volume. Vent gases flow through and up a vent because they are hotter—and hence lighter—than the ambient air. Furthermore, their rate of flow will vary directly with their temperature—the hotter they are in relation to the ambient air, the faster they will flow. Hence, it is obvious that the heat content of the *flue* gases, which are the products of combustion in the appliance *before* they enter the vent, represents the available power to operate the vent. It follows then that the first requirement of a vent is to conserve this available power and obtain its maximum utilization throughout the length of the vent—in other words, to keep the vent gases hot.

There are, however, other properties of a vent which influence the flow of gases and these must be evaluated if we are to complete our study of the underlying factors involved. We can assume from the laws governing the flow of fluids that the height (H) of a vent is one of the factors and that the area (A) will also influence the flow. We also know that, with a vent of given diameter and height, any change of resistance (R) of this vent will affect the flow. We then find that the important factors involved in the flow of gases through a vent are:

B = heat content of the flue gases.
b = heat loss through vent walls.
A = area of the vent.
H = height of vent.
R = resistance of vent and draft hood.

The next step is to determine the relationship of these important factors and express this relationship in the form of an equation. From the fundamental law of gravity $V = \sqrt{2gh}$, it can be shown that the volume (Q) of gases flowing through a vent is directly dependent upon the area of the vent, the square root of the height divided by the square root of the resistance and a temperature term related to the temperature of the vent gases. Since the volume of a gas (at constant pressure) varies in proportion to its temperature, we can express the volume in terms of the heat content of the flue gases (B) and arrive[2] at the following simplified equation:

$$B = Ac \frac{\sqrt{H}}{\sqrt{R}} (Ta - k) + b$$

where:

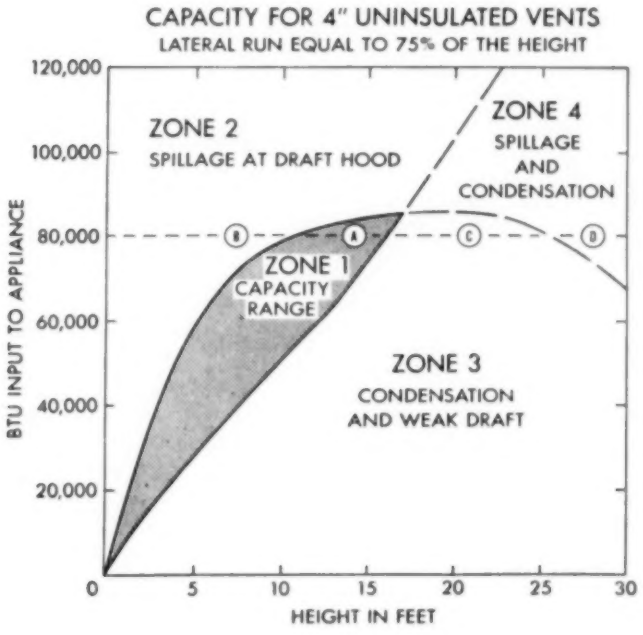
B = the heat content of the flue gases in Btu's
A = the area of vent in square inches
H = the height of the vent in feet
R = the resistance of the vent in velocity heads
Ta = the average temperature of the vent gases in the vertical portion of the vent in degrees Fahrenheit
b = the heat loss through the walls of the vent up to the midpoint of the vertical vent in Btu's
c and k are constants related to ambient temperature and altitude.

*President, William Wallace Company, Belmont, Calif.

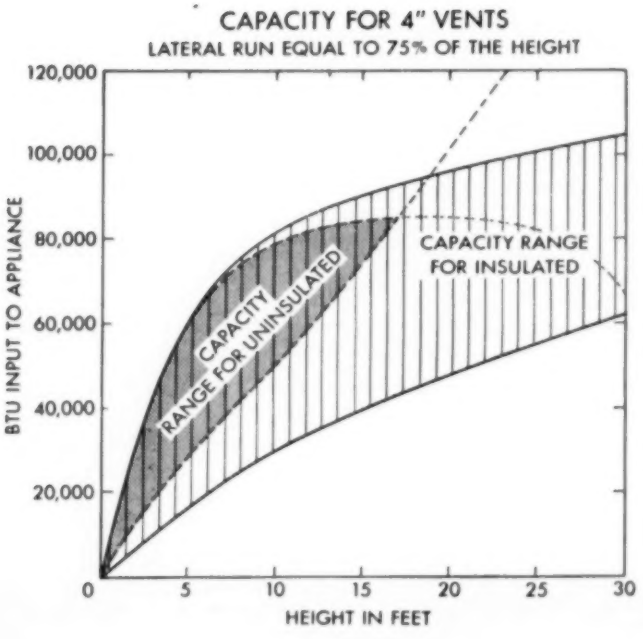
[1]Recently completed by William Wallace Company, with the help of the Stanford Research Institute.

[2]As reported in the proceedings of The Pacific Coast Gas Association, Vol. 43, 1952.

A study of this equation shows that the important variables are the average temperature (Ta) of the flue gases, and the heat loss (b) through the walls of the vent. It is obvious that—with a vent of given area, height, and resistance—the amount of heat content it can handle (expressed by B) will be determined by Ta or b or, in a sense, by the extent to which the vent *conserves* the available heat in the flue gases. Thus, our equation clearly proves that the average temperature (Ta) in the vent represents the "power" available to make the vent operate, and that the lower the heat loss (b) the greater will be the "power" with which to vent. If this "power" is allowed to fall below a certain point, the vent will not carry off the required volume of flue gases (deter-



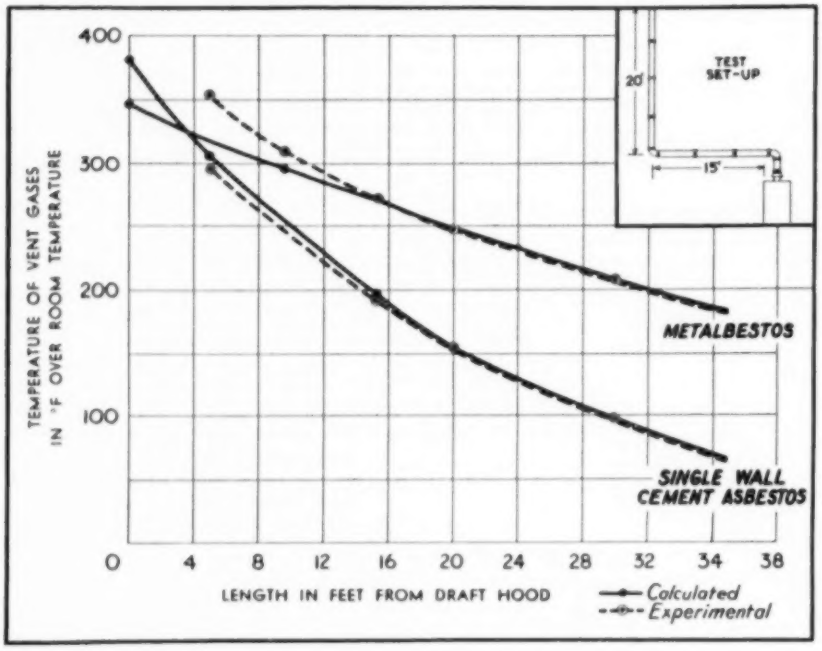
Using Kinkead's equation, this chart shows maximum- and minimum-capacity curves for an uninsulated vent for which we assume a Btu input of 80,000, a maximum temperature of 460 F, leaving the draft hood, and a minimum temperature in the vent of 180 F (to avoid condensation). These curves illustrate the following four conditions that may exist in gas venting: (1) If the intersection of the Btu input and heights falls in ZONE 1, *the "Capacity Range," the appliance will be properly vented* (Point A, *80,000 Btu input and 15' high). (2) If this intersection occurs above both the maximum and minimum curves,* ZONE 2, *there will be spillage at the draft hood* (Point B, *80,000 Btu input and 8' high). (3) If this intersection lies under both the minimum and maximum curves,* ZONE 3, *condensation is likely and the draft will be weak* (Point C, *80,000 Btu input and 22' high). (4) If the intersection is above the maximum and below the minimum,* ZONE 4, *there will be both spillage at the draft hood and condensation in the vent* (Point D, *80,000 Btu input and 28' high). While this last zone probably represents the worst-possible venting condition, the curves clearly demonstrate that improper venting to some degree will result from the use of an uninsulated vent except between the narrow range of heights from approximately 10'-17'.*



This chart shows how heat loss through the walls of a vent affects the "Capacity Range" of a gas vent. The solid lines are the capacity curves for Metalbestos, a double-wall, insulated vent. The dotted lines represent the capacity curves of uninsulated vents such as single-wall sheet metal, cement asbestos, and terra cotta.

It can be seen that the greater "Capacity Range" of the insulated vent safely covers a good part of the dangerous ZONE 4 *of the uninsulated vent. It also covers part of the "spillage zone" and a large portion of the "condensation zone" of the uninsulated vent.*

For the 80,000 Btu input, the use of an insulated vent increases the safe height to 38' (off chart). In this case, the safe range of heights is 10'-38' as compared with 10'-17', four times greater than the range of the uninsulated vent.



As a basis on which to design gas-venting systems, the validity of Kinkead's equation has been proved conclusively by extensive tests with both laboratory and actual field installations. In the above chart, notice the close correlation between the calculated values derived from the equation and those obtained by actual experimentation.

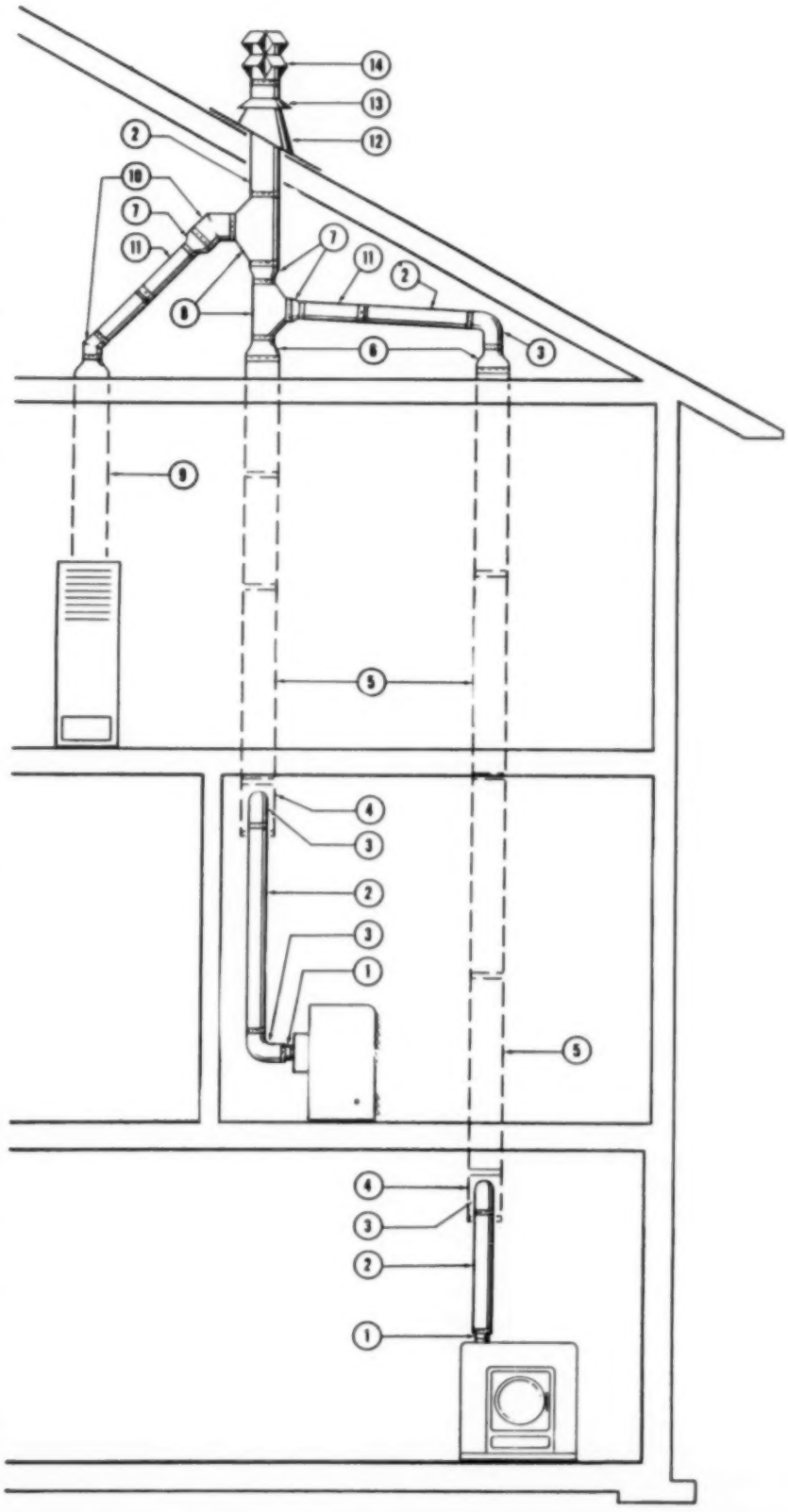
mined by B) and spillage will result. Since, for a given installation, this reduction in "power" simply means a lowering of the average vent gas temperature, condensation will also result if this temperature is reduced to the dew point. If we agree that the function of a vent is to remove all the products of combustion to the outside air—without spillage or condensation—then the equation defines vent capacity. It can be used, therefore, to design a vent of proper capacity for an appliance of given Btu input.

Before this equation is used to design a vent, however, it is desirable to understand its maximum and minimum limits—to determine the range of practical usage allowing for actual operating conditions. For a given gas appliance, the term B is fixed: it represents the amount of heat being delivered to the draft hood, which is established by the input rating and heat transfer efficiency of the appliance. With the left side of the equation fixed, the temperature (Ta) in the vent (and hence the capacity) can be varied by changing the area, height, heat loss, or resistance of the vent. For a given venting problem, the height of the vent is approximately established by the conditions of installation. So also is the resistance which, for practical purposes, is established by the number of tees and elbows required to run the vent to the outside. Thus, the area and the heat loss are the two key factors involved in the design of an adequate system.

In order to evaluate the practical limits within which the area of a vent may be varied, we can assume that the heat loss is constant. In other words, the design and the materials of construction of the vent pipe are fixed as well as the height. Then a *decrease* in the diameter (or area, A) of the vent will cause a corresponding temperature *increase* (Ta). As the area is decreased, the temperature will finally reach a value close to that of the flue gases entering the hood. Any further reduction in A would raise the temperature higher than the available temperature, which is impossible. At this point we have reached the minimum diameter that will work—any further reduction would cause the flue gases to spill from the draft hood. Just before this occurs, we can say that the vent is operating at its *maximum capacity*.

If, under the same conditions as above, we increased the diameter, then with each increase would come a corresponding decrease in the average temperature of the vent gases. A point finally would be reached where any further increase would reduce the temperature of the gases to the dew point and condensation would begin. Just before this occurs, the vent can be considered as operating at its *minimum capacity*. Thus, a vent of given height and type of construction will be operating at its maximum venting capacity when the minimum diameter of vent is used which does not cause spillage at the draft hood.

By the same process, the equation shows that, for a vent of given dimensions and resistance, any increase in heat loss will cause a corresponding decrease in the value of Ta,



Typical gas-vent installation in two-story home showing use of double-wall, insulated vent pipe to assure proper venting of gas appliances.

1. **Draft Hood Connector . . .** fits over the round or oval flue collar of the gas appliance and has quick-coupling outer end.
2. **QC Round Pipe . . .** maintains strong draft and eliminates condensation. Available in many lengths and sizes.
3. **QC 90° Round Elbow . . .** provides a smooth right angle change of direction for vent gas travel. Also used for take-off at bottom of vertical vents.
4. **QC Round to Oval Tee . . .** shown here inside of wall . . . creates transition from round to oval vent pipe, as well as change of direction of vent gas travel.
5. **Oval Pipe . . .** designed to be installed inside a 2"x4" stud wall with only minimum furring out required for combustible construction.
6. **Oval to QC Round Adapter . . .** provides a transition from oval to round vent pipe and fittings.
7. **QC Round Increaser . . .** creates a smooth concentric change in the cross sectional area of a round vent line.
8. **QC Round Tee . . .** joins two vents into a common vent. Also used at bottom of vertical vents.
9. **METALBESTOS Wallvent . . .** fits inside a 2"x4" stud wall to vent recessed wall heaters safely, and listed by Underwriters' Laboratories, Inc., for use within ⅛" of combustible construction. A packaged unit available in various lengths.
10. **QC 45 Round Adjustable Elbow . . .** easily swiveled from 45 through any intermediate angle to a straight length.
11. **QC Round Adjustable Length . . .** permits variable extension of QC round pipe from 3" to 17" without cutting or crimping.
12. **Roof Flashing . . .** all-aluminum and adjustable for various roof pitches.
13. **Storm Collar . . .** additional weather protection around vent pipe above roof flashing. Aluminum.
14. **Belmont Top . . .** exerts highly efficient "ejector" action regardless of wind direction.

the average temperature of the vent gases. While this should be a self-evident fact, it apparently has not been given much weight if we are to judge by the kinds of vent pipe materials still in common use. No one questions the necessity of insulating steam lines or hot air ducts; few people seem to realize that gas vents must be insulated for the same reason. The explanation is that, until now, we did not understand the function of the vent gas temperature and did not fully appreciate the importance of conserving the heat content of the flue gases. What our equation proves is that the first and most important requirement in designing a vent for gas appliances is to use a material which will permit maximum conservation of flue gas heat, yet allow for the practical considerations of installation and total cost.

The effect of these findings on existing concepts and practices can be demonstrated by applying the equation to the conditions of one test arrangement under which gas appliances are tested by A.G.A.—a straight, vertical vent four feet in height and of the same diameter as the vent collar on the appliance. Since the four-foot vent presumably removed all the products of combustion, it is likely that a reduction in height to three feet will unbalance the equation and reduce the value of B. Since B is fixed by the rating of the appliance, the amount of its reduction in the equation will represent spillage. In order to avoid spillage without increasing the height or the insulation of the vent, we must increase the area. In this case, therefore, we find it necessary to provide a vent of greater diameter than that of the vent collar. On the other hand, if we increase the vent height above four feet, the value of Ta, the average temperature of the vent gases, will decrease.

Successive additions to the height will finally cause the temperature to reach the dew point and condensation will occur. If this final height must be maintained, the only way to bring the equation into balance is to reduce A, or the diameter of the vent. Thus, under certain conditions, it may be necessary to reduce the diameter of the vent to a size *smaller* than that of the vent collar. Practically all codes prohibit such a reduction in size, thereby making it impossible to install a proper vent under certain conditions.

Most codes require that a lateral run have an upward slope of ¼" per foot, while laterals in attic spaces are required to slope upward at least 45°. Actually, there is no scientific basis for this requirement. The only effect a lateral has on the equation is the almost negligible increase in resistance caused by the sharper turns as compared to a sloping lateral. Actually, if the vent is run vertically a foot or more up from the appliance (to offset the inertia of gas flow) a perfectly horizontal vent will not affect vent operation.

Many codes require that when two vents are connected to a common vertical vent they must intersect at an angle of not greater than 45°. This is another restriction with no sound basis for its existence. Strangely enough, most codes permit the common practice of running a single wall, uninsulated pipe lateral from the appliance to an insulated vertical vent. This, of course, allows a substantial loss of heat before the gases reach the vertical run, reduces the value of Ta, and wastes a good portion of the "power" available to make the vent operate.

Probably one of the most harmful code restrictions, and one that is quite common, is that which requires use of a T at the bottom of the vertical vent where the connection is made to the lateral from the appliance. This involves, with the one to three elbows required, a considerable increase in resistance, causing a decrease in the right-hand side of the equation—and serious spillage at the draft hood might occur. Another restriction harmful to proper venting is the present trend of specifying the maximum Btu input (into the appliance) per square inch of vent area. This practice tends to force installers to use oversize vents, since the ratings are based on incorrect tables of capacities which generally overstate vent diameters, because of erroneous assumptions as to heat loss and average vent gas temperature.

Still another misconception about gas venting is the popular belief that the capacity per square inch of an oval pipe is drastically lower than that of a round pipe. This belief was fostered by an authoritative report, based on inconclusive experimental work, which stated that a round vent was found to have about 2½ times as much carrying power as an oval vent. Actually, the only difference is that an oval pipe will have a slightly higher heat loss due to its greater surface area and a slightly greater resistance due to the higher ratio of its perimeter to its area. These two differences make the vent capacity of oval pipe slightly less than that of round pipe—possibly 3% to 5%—but certainly not 60% less.

These examples of incorrect venting practices indicate the urgent need for prompt revision of many present code regulations and installing practices. How quickly this is done will depend largely on the ability of code authorities and industry groups to part with the deeply-rooted misconceptions inherited from the past. However long this may take, gas appliance users are now in a position to demand and obtain a soundly-engineered gas venting system which completely eliminates condensation and spillage —which continuously removes *all* the products of combustion. A vent pipe is available[1] which is designed specifically to vent gas appliances and which will continue to operate as a rigid, integral venting system for an indefinite period. It is now possible to determine *in advance* how a given vent installation will operate. It is also possible to specify correctly the exact manner in which the vent should be installed under given conditions.

It has become accepted practice for the heating contractor to design a proper heating system: to compute heat losses of windows, walls, and ceilings, calculate the required Btu for adequate heating, determine the correct duct size, and otherwise apply engineering methods to the problem of heating. The same design considerations with respect to gas venting are necessary if he is really to finish his job. Fortunately, complete tables based on the equation previously discussed are now being developed by the writer's company to simplify the design of a proper venting system and can be obtained without cost in the near future. In fact, for the vast majority of installations, these tables will provide complete capacity data without the need for elaborate calculations. This information together with a vent-installation handbook now available, and additional material to follow, constitutes a valuable contribution to the gas industry and the heating business which, once and for all, will place the venting of gas appliances on a sound scientific basis.

[1] *Metalbestos.*

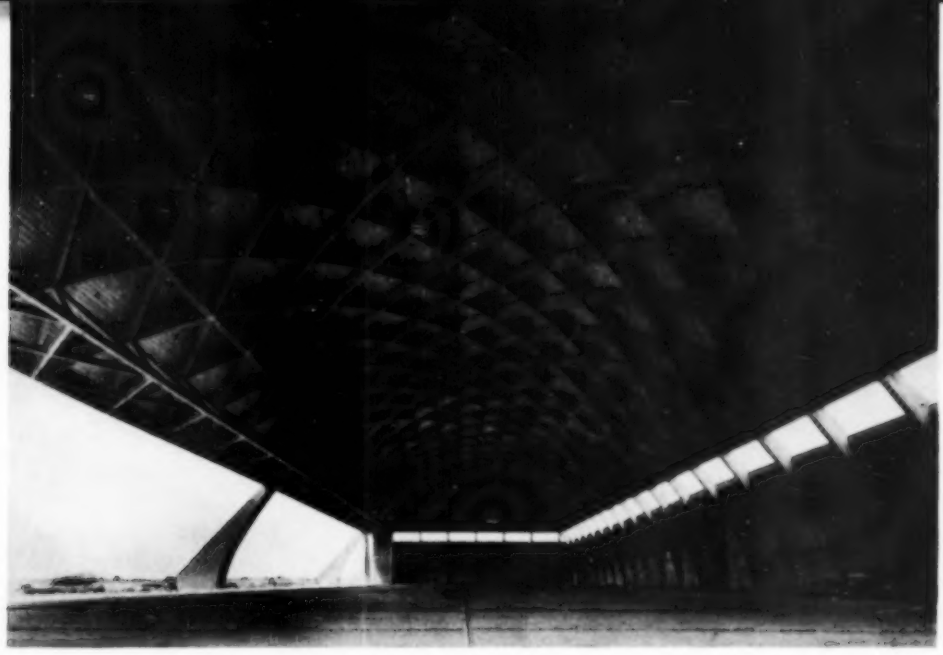


Figure 1—airplane hangar near Rome, Italy (1938).

geodetic and plastic expressions abroad

ITALY: Pier Luigi Nervi

by A. L. Huxtable

Pure engineering, in the hands of an artist, has created some of the architectural masterpieces of our age.

It is seldom, however, that the engineer's instinct for esthetic calculations is as sure as his knowledge of mathematical formulas. When this happens, as in the hangars and warehouses of Pier Luigi Nervi, structures of dramatic beauty result. Because Nervi's feeling for form equals his almost uncanny understanding of the complex structural possibilities of reinforced concrete, he has produced a series of buildings that are of equal importance to the science of engineering and to the art of architecture.

Nervi's engineering contribution has been the covering of great open spans with ingeniously ribbed, reticulated or corrugated systems of reinforced-concrete vaulting. New constructions have resulted in completely new building forms — curved monolithic shells, tent-like shapes, undulating roofs, and angled supports—all striking departures from the rectilinear principles that have been symbolic of construction since man's first efforts to build. From Paxton's Crystal Palace in Victorian London to Nervi's Exposition Hall a century later in modern Turin, engineers have pioneered the revolutionary constructions that have created the new architecture.

If the 19th Century was the Age of Iron, then the 20th Century is the Age of Steel and Reinforced Concrete—and Nervi one of its greatest prophets and pioneers. The last 20 years have produced important developments in reinforced concrete that indicate revolutionary architectural possibilities in the framing of space. Concrete construction has been growing lighter, due to improvement and standardization of the material and to developments in vibrating, precasting, and prestressing. New structural forms have shifted the emphasis from monumental masses to the space-enclosing shell. To Nervi's credit is his contribution to the development of ferro-concrete and the integrated use of a metal-armature skeleton with concrete, providing a greater strength and a greater range of structural possibilities than could be achieved by ordinary techniques.

The record of Nervi's achievements covers an important 20-year period. The first of his large projects was the community stadium of Florence, built in 1932. Shortly after this, in 1935, studies began for two airplane hangars outside Rome, the first erected in 1938, the second in 1943. These spectacular structures cover the same span, 328′ x 131′, but differ in design. The first (*Figure 1*) is a classic example of a lamella-type roof, in-filled with brick tiles covered with asbestos cement and supported by evenly spaced buttresses on three sides, with a single additional support in the center of the entrance span. The later hangar, using a roof of prefabricated lattice members with stiffening beams along the edge and only six buttresses supporting its span, is an audacious solution of a great visual and technical excitement.*

In 1947, a competition was held for a new exhibition hall to replace the bombed area of the Palazzo Esposizione in Turin (*Figure 3*). The requirements were speed, size, economy, and facility of erection. Since the problem could not be solved by existing techniques, Nervi won the com-

This article is based on a section of an exhibition, "Modern Italian Architecture and Design," prepared by the author for the International Program of the Department of Circulating Exhibitions of the Museum of Modern Art, New York.

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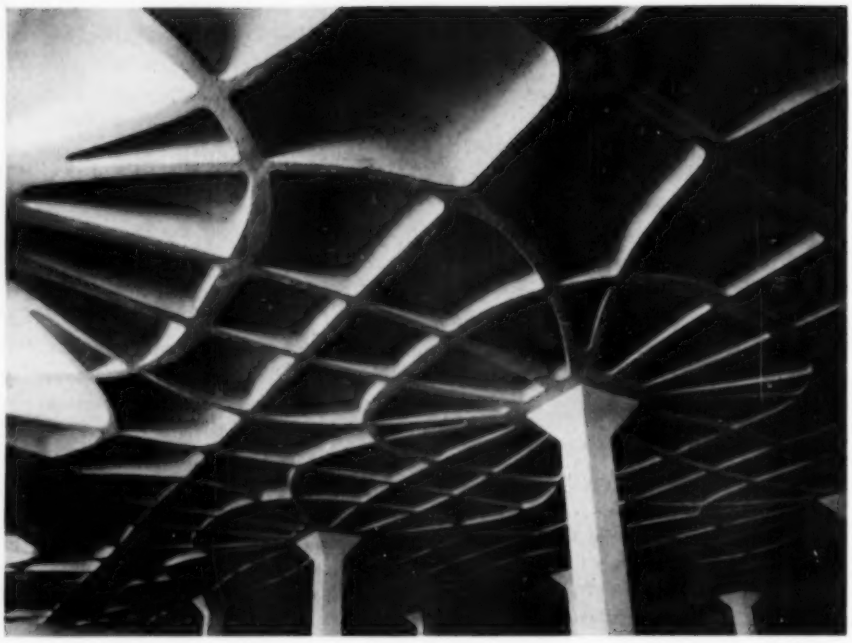


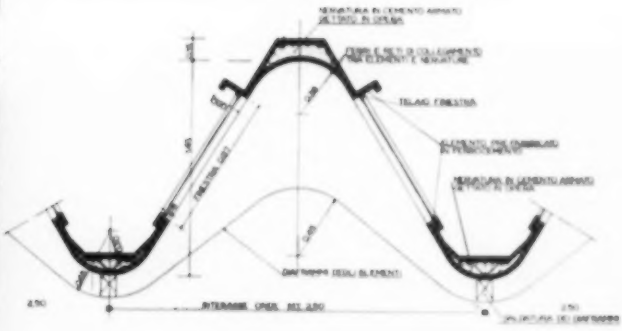
Figure 2—Lanificio Gatti factory, Rome, Italy (1951). Nervi has devised numerous roof systems of precast or poured-in-place, flat-ceiling slabs joined by intricate stiffening networks for distribution of stresses. Ceilings of the Lanificio Gatti factory were poured continuously in place with the forms (above right) set on movable scaffolding. Removal of the scaffolding left a smooth upper surface at floor level and a reticulated ceiling surface underneath, with stiffeners collecting the load at column heads (above and right).

mission by the invention of a system of prefabricated units which would form a corrugated barrel-vault and which could be mounted and joined in a minimum of time. Each day, approximately 30 of these units were set in place on a tubular scaffolding; and as each quarter of the construction was completed the scaffolding was lowered, moved forward, and the process repeated. Precast stiffeners add a rhythmic emphasis to the undulating pattern of the ribs. The forces are gathered into groups of four converging ribs at the sides of the hall, transmitted to widely-spaced, sloping abutments, and then to concrete masses below ground. There are two lateral galleries and a rotunda 132′ in diameter at the far end, covered with a half dome. The ribs of this dome are used as stiffeners rather than for carrying stresses and form a decorative element indicative of some of the design freedom of the engineer.

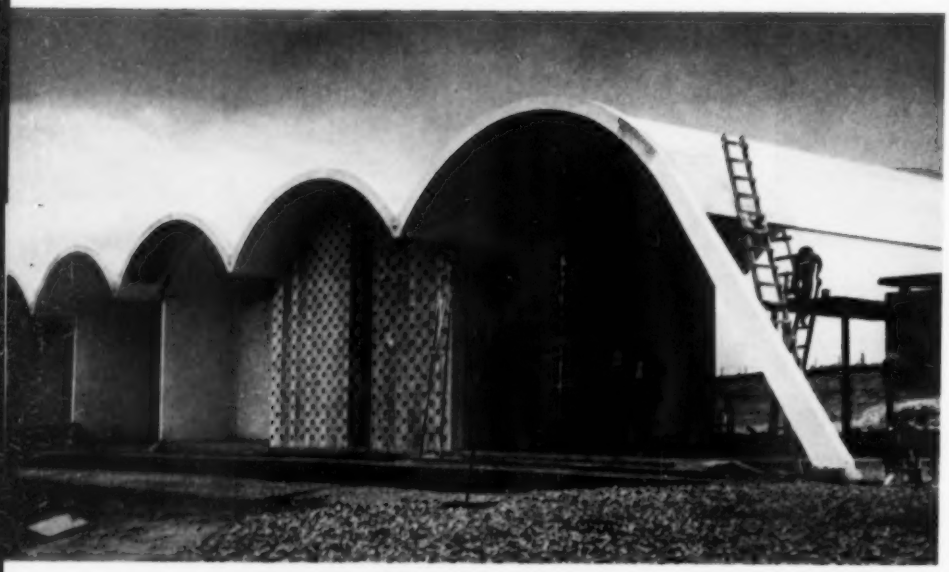
There is, unfortunately, a too generally accepted division between scientist (engineer) and artist (architect), and too little realization of the enormous choice that is open to the engineer in his development and use of structural elements. In 1950, Nervi and his partner, Bartoli, added another salon to the Turin exposition building, this one approximately 213′ x 180′, and completed a handsome salt warehouse at Tortona, both utilizing lamella-type ceilings. Since 1950, he has been developing a series of flat-slab ceilings for factories and warehouses; notable among them the Lanificio Gatti factory of 1951 (*Figure 2*) and a tobacco factory in Bologna (1952). Reinforcing networks of intricate mathematical design stiffen and separate reinforced-concrete slabs, accepting and distributing weight and stresses to make possible large spans and simple monolithic enclosures.

These factories, warehouses, and hangars are indisputably among the most stimulating buildings of our day and represent two noteworthy directions in contemporary work: a new concept of construction, and a new sense of space. The resultant fusion of structure and form may prove to be more significant for the architecture of the 20th Century than the much-discussed integration of the traditional arts.

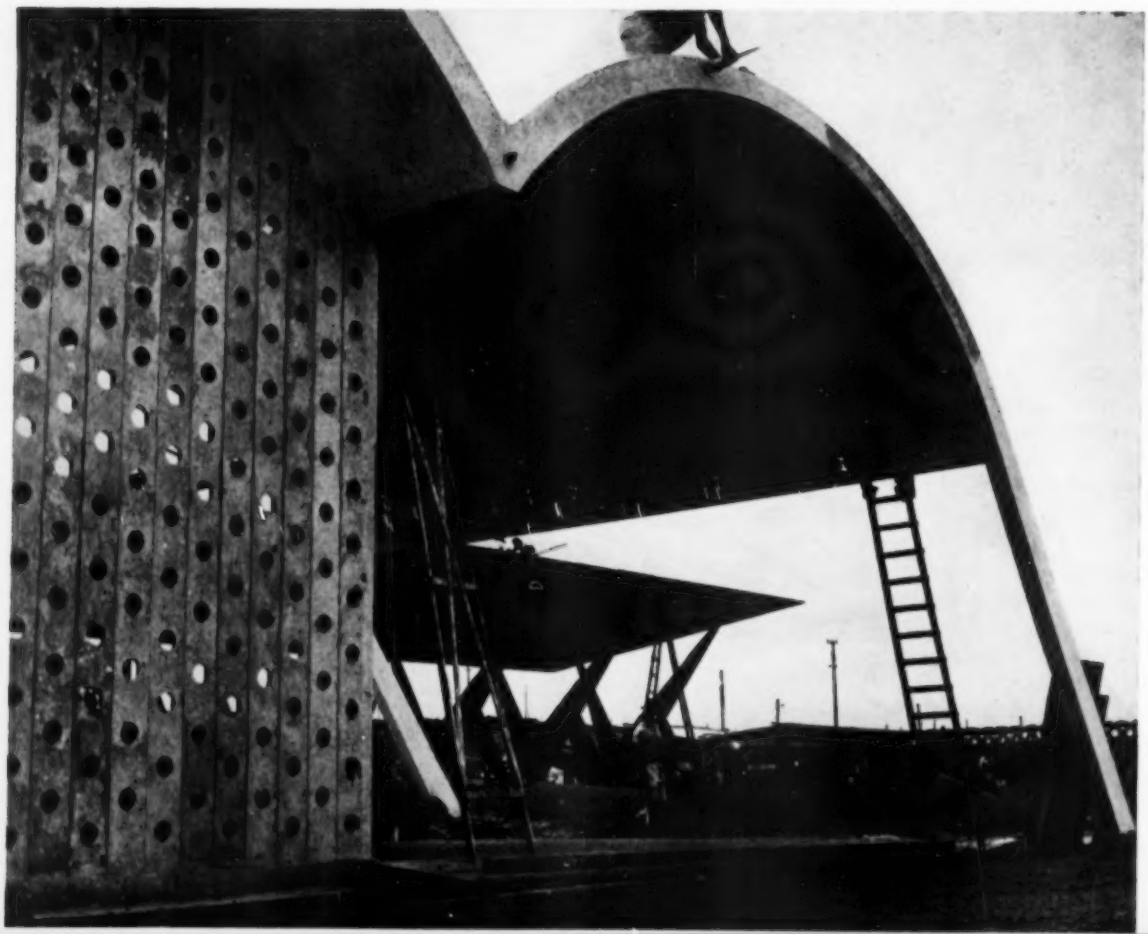
Figure 3—Exposition Palace, Turin, Italy (1947). Prefabricated units (right) *of the corrugated roof were consecutively mounted on a tubular scaffolding, fitted together, and joined with poured concrete. Exterior view of roof with elements in place* (below). *Section of element* (below right) *is width of one wave, 14½′ long and slightly more than 1½″ thick.*



The abutments (left) *receive the full load of the 320′ span at an angle that makes possible a sharply cantilevered balcony. The finished hall* (below) *shows clearly the completed effect of the ingenious system of construction, and equally important, an architectural design of great esthetic success. The vast interior space is modeled and controlled by a structural shell that provokes an immediate sensuous and emotional response by its rhythmic patterns and dynamic curves, its coloristic effects of light and shade.*



Club dos 500, *São Paulo (an automobile service station). "Customer-attraction" pylon* (above); *details of repetitive barrel-vaults over administrative area* (left and below); *two views of service area* (acrosspage). ***Elements of the plan are: (1) portico; (2) office; (3) rest rooms; (4) offices; (5) storage; (6) pumps; (7) lubrication pits.***



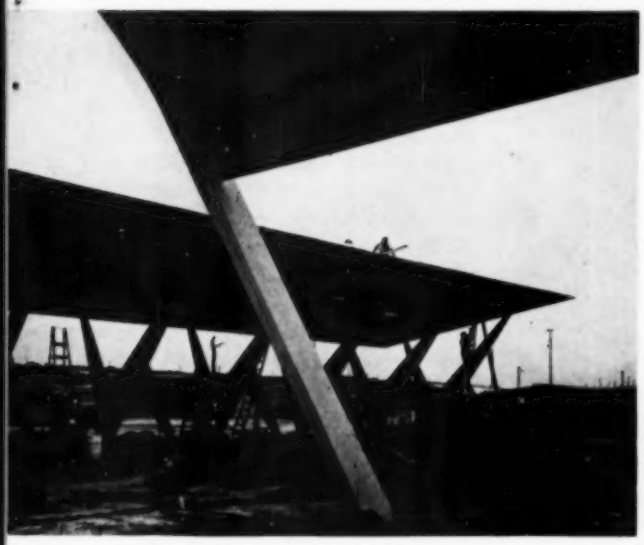
BRAZIL: Oscar Niemeyer

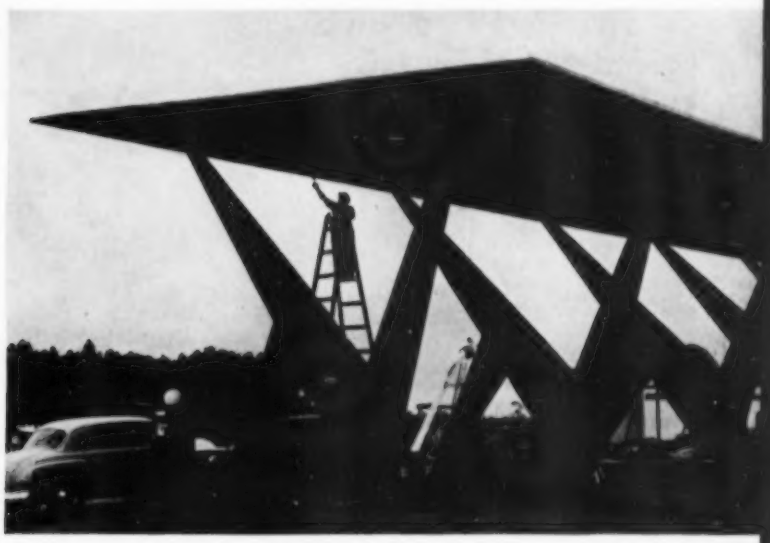
Niemeyer has written that architecture must express the spirit of the technical and social forces of a given epoch. While his own design complies with this dictum, it is also curiously influenced by the vestiges of colonial baroque as well as the climatic and physical aspects of his native Brazil. His abundant use of plastic structural expressions clearly displays his affinity for the baroque, while his work unquestionably embodies contemporary technology creatively applied to the solutions of spatial problems.

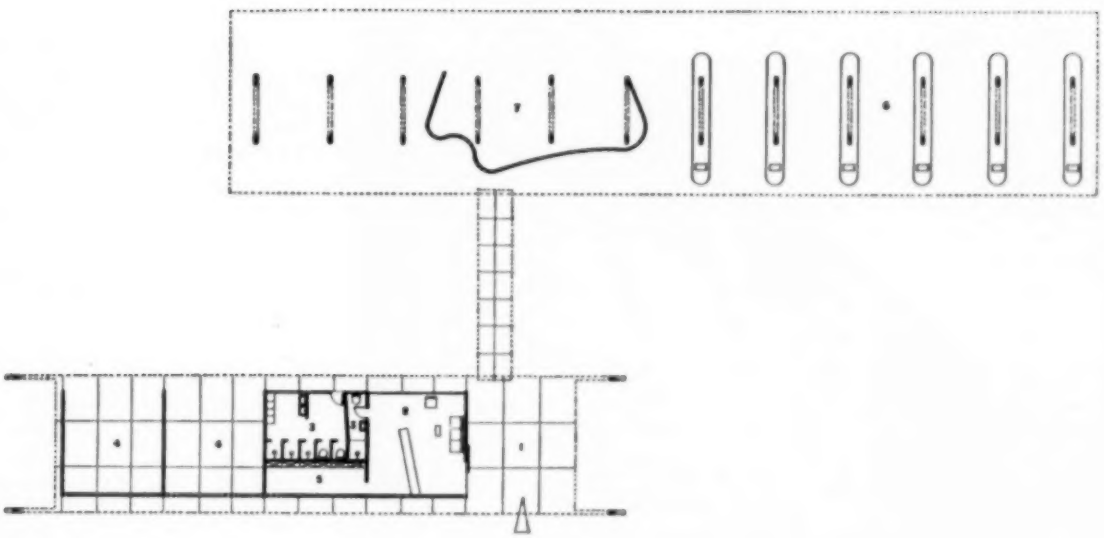
This brief but visually exciting examination of two reinforced-concrete structures in Brazil has been staff prepared.

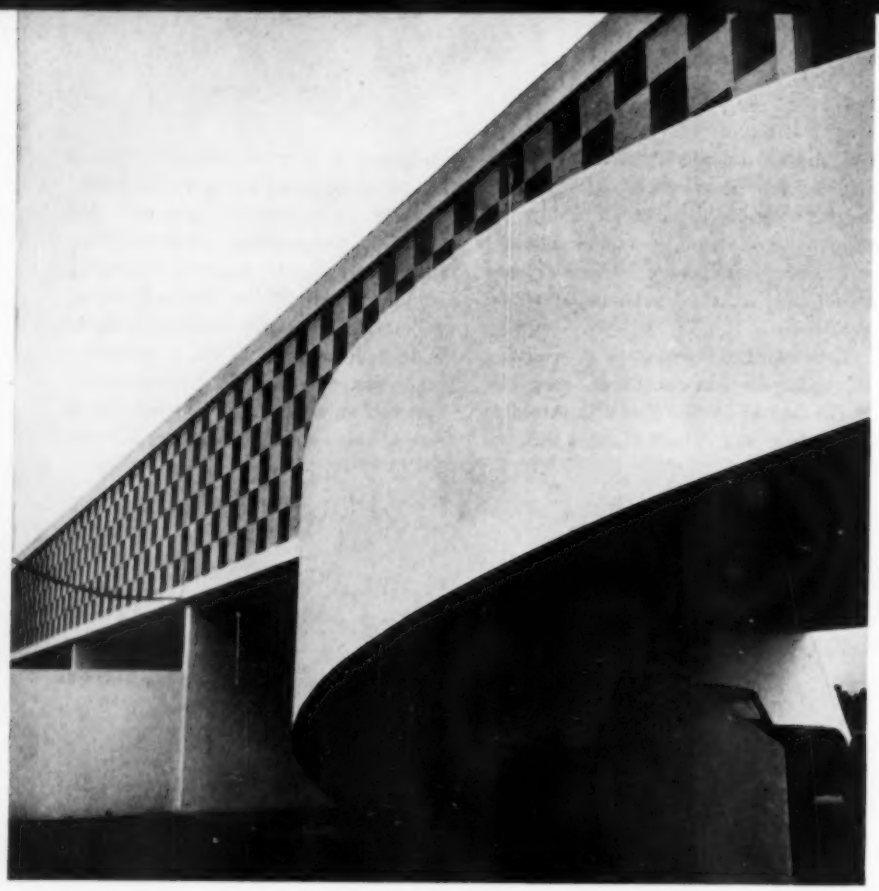
To document a few of these observations, this architect's *Club dos 500*, an automobile service station in São Paulo, is presented (*acrosspage and below*) together with two row houses at the Aeronautical Training Center, São Jose dos Campos (*overpage*).

In the service station, note how the repetitive barrel-vaulting over the administrative areas clearly displays Niemeyer's love for the curved form and in execution how it compliments the geometric vigor of the vertical supports in the open service area. Also, note that the boomerang-like "customer-attraction" pylon (located in front of the station near the main road)









Differing methods of providing privacy and sun control are found in the north elevations of two row houses at the Aeronautical Training Center, São Jose dos Campos.

leans in defying contrast to its rigidly perpendicular counterpart that is so abundantly found in shopping centers, supermarkets, and other commercial developments in the northern hemisphere of America.

If one were not told where this station had been constructed, he could make a fairly accurate estimate of the climatology of its location by the appearance of the structure alone. Note the length of the overhang integrally formed by the extensions of the barrel-vaults; the general lack of doors and windows in the administrative units; the openings in the precast-concrete vertical panels along the front façade of the office area; the magnificent, shading concrete-roof panels over the service area.

Essentially the structural system is simple: barrel-vaults are supported at their springings by the concrete walls sepstating individual offices. Live loads and dead loads acting on the concrete panels over the pumps and lubrication pits are carried to earth by members whose design reflects the pattern and location of both existing and potential static forces.

Different row houses at the Aeronautical Training Center exhibit two of Niemeyer's methods of obtaining privacy and sun control for northern exposures. Checkered pattern of blocks affords protection for a second-floor exterior corridor (*left above*) while wood louvers in a frame pitched 70 degrees from horizontal protect two-story living rooms (*left below*). In the design of both buildings, load-bearing brick masonry and reinforced concrete were specified. See how the grid pattern of the sun control (*in upper photo*) is softened by the baroque character of the circular stairway.

the ARCHITECT and color photography

by Morris Lapidus

The use of color photography makes it possible for the architect to discuss in definitive detail many aspects of his projected building. Color combinations in offices, windows, store fronts, and showrooms, which until five or six years ago could only be suggested in black-and-white photographs, can now be shown clearly and accurately in natural color.

This is a handy tool for the architect, since color today plays an important role in building materials. Many building materials come pre-finished in color. The choice of a type of brick or wood often depends on the colors in which it is available. Color photography aids the architect in discussing such details with his client.

In line with this trend to color, a great many of the more progressive firms are now making slides of their products available to architects. The thinking behind this is that architects present their sketches in color, so why not photographs? Consequently, more and more architects are using color slides to show their work to clients. It may be that eventually the 35-mm color slide will become as much a part of the equipment of the modern architect as his blueprint.

How can the architect set about developing a file of 35-mm color slides of his more important buildings? The first step is to buy a 35-mm camera. This type of camera is easy to use, highly effective, and inexpensive. Its fast lens enables one to take pictures that are sharp and detailed. When buying film for it, the cost of processing and mounting is included, so that the cost per print is only about twelve cents.

As to showing color pictures to clients, there are four basic ways in which this can be done: (1) by means of projection, using a slide projector; (2) by enlarging the 35-mm slide to a color print; (3) by means of a hand viewer; and (4) by using a table viewer.

While the projection method is by far the most dramatic and effective, and can be used to great advantage, it poses problems because of the necessity of setting up projector and screen, moving furniture to get a clear throw of beam, and darkening the room. The projection method can only be used in the architect's own office, because of its space requirements.

As for color prints, the cost of enlarging them to such a size that the architect may point out the features of the building is exorbitant. Up to now, any except the very expensive prints lack true color and brilliance. The age-old theory of light, that reflected color is never as effective as projected color, renders this method undesirable.

As for the third alternative, hand viewers, these consist chiefly of a magnifying glass with means to hold the slide. This is as impractical as the projector, because only one person can view the slides at a time, consequently preventing the architect from bringing out intricate details and features of the building. This same difficulty applies to all hand viewers, including expensive ones.

For the purposes of the architect, the table viewer is the most effective way of demonstrating 35-mm color slides. There are several good viewers on the market which are specifically designed so that they can be viewed by five to six people at a time. In viewers, color film is projected to a self-contained translucent screen. This obviously is the most desirable way to show pictures, because lights need not be turned down in the room and the picture is large enough so that detail can be seen.

Best of all, by means of the viewer the architect can work with his pencil as a pointer, showing desirable features of his work. Especially recommended is a portable table viewer, which is light, compact, and folds up like a camera. This type of viewer is currently widely used by industrial firms in demonstrating their products.

The advantages of 35-mm color slides to the architect are almost too numerous to mention. When you present your drawings to a prospective client, for example, you can show not only the drawings but also color slides of the drawings, which will give the client a better illusion of the finished building.

As to slides of manufacturing materials, they cut down the burdensome samples of materials that the architect must sometimes carry with him.

In another connection, too, color slides are of considerable importance to the architect. It is a customary procedure to submit progressive shots of the building to the client in black-and-white photographs. By showing these in color, the effect will be better. For American architects who work abroad, the 35-mm slide is of great assistance in demonstrating large construction jobs that the architect has completed in the past.

More advantageous than anything else, though, is the economy that results when 35-mm film is used. Not only the essential equipment, but also the cost of the slides themselves is minute. Any good camera store will assist the architect in purchasing the right camera and equipment for his purposes. The architect employs color when he shows a presentation drawing to a client. He should employ this oldest and most adroit of visual aids in his photographs, too.

p/a products

continuous-strip eave-to-eave insulation

At Lutheran Concordia Seminary, St. Louis, Missouri, a field house was recently completed at a relatively low cost with structural members in small sections forming an arch-type support for a corrugated-aluminum roof sheeting. Ultralite, a glass-fiber insulation material, was chosen over other insulating materials since it could be applied from the outside and thus save the expense of interior scaffolding. The Ultralite panels, faced with moisture-barrier and supplied in rolls 2′ wide, 2″ thick, and 186′ long, were rerolled on the job from each end to center, taken to the peak of the roof, and allowed to unroll down both sides.

Applied directly beneath the aluminum sheeting and compressed over the structural sheeting, the insulation strips were pulled tight with block-and-tackle and wooden clamps while roof sections were fastened to the steel purlins very simply by drive screws with neoprene washers. Architects were Lorenz & Wischmeyer, St. Louis, Missouri. Gustin-Bacon Manufacturing Co., Kansas City, Missouri.

completely operatorless elevatoring

Even the elevator starter, the last remnant of manual control for operatorless elevators, has been eliminated in Westinghouse's completely automatic elevator-control system now available for general sale. Called Automatic Traffic Pattern Control, it is the latest addition to the Westinghouse Selectomatic, the electronic supervisory system that makes elevators work as a team in heavy traffic buildings. This system has been especially designed for buildings where the demand for elevator service changes drastically at certain periods of the day. In the early morning

air and temperature control

Room Air Conditioners: ½-hp unit designed for room areas up to 300 sq ft under average conditions, ¾-hp unit for room areas up to 500 sq ft. Both models adjust automatically to room temperature changes; refrigerating mechanism controlled by thermostat which is adjustable to any one of 6 settings. Air is also dehumidified and filtered. Units designed for window installations but adaptable for through-wall or cabinet-type installations. General Electric Co., 310 W. Liberty St., Louisville 2, Ky.

Central Cooling Unit: new unit in 2- and 3-ton sizes, may be installed in new or existing forced warm-air heating system. Protection afforded by thermal overload device and high-low pressure control. Multiple feed expansion valve; receiver provided by generous supply of Freon 12 refrigerant. Condenser easily cleaned, can be connected either to city water system or to cooling tower. Iron Fireman Mfg. Co., Cleveland 11, Ohio.

Dehumidifier: portable plug-in model will extract more than 3 gal of water per day from up to 10,000 cu ft of room air; does not require special wiring, plumbing, or permanent installation. Unit, including reversible water container, finished in gray enamel and equipped with ⅛-hp motor that operates air circulation fan and refrigeration system charged with Freon 12. Hotpoint Co., 5600 W. Taylor St., Chicago 44, Ill.

Wall Diffuser: new perimeter-heating diffuser sprays warm air upward and to all sides at reasonably high velocity. Diffusion pattern starts at 45° from floor, extends over a 90° fan-shaped spread blanketing cold outer wall or window area. Smooth, one-piece standard face, electrostatically-applied metallic finish. Diffuser designed for ceiling, low, or high side wall installation. Two sizes: 10″ x 6″ and 12″ x 6″. The Lima Register Co., Lima, Ohio.

construction

Epiphen XR-823: new epoxide-resin adhesive is suitable for bonding nonporous surfaces. Resistant to boiling water, acids, alkalis, and most organic solvents, adhesive has shown good results in bonding metal, glass, natural or synthetic rubber, ceramic materials and wood, phenolic and glass-fiber laminates, either to themselves or in various combinations. Borden Co., Chemical Div., 350 Madison Ave., New York 17, N. Y.

Roof Drain: new drain, cast iron or bronze, has especially large and deep sump area which acts as temporary reservoir, eliminating swirling and splashing and allowing entrained air to escape before water enters drain pipe. Mushroom-type dome strainer, flush with roof level, increases free open area of straining surfaces up to 9:1. Gravel guard prevents clogging of primary drainage. J. A. Zurn Mfg. Co., Erie, Pa.

doors and windows

Toplite System: prefab panels of hollow-glass units set in insulated-aluminum grids are suitable for installation in schools, industrial, commercial, and other types of buildings. Weatherproof, glareless units give uniform light transmission, low solar heat transmission in summer months, and provide good insulation during cold weather. Panels weigh 16 lb per sq ft and are made in four sizes: 3′ x 3′, 4′ x 4′, 4′ x 5′, and 3′ x 6′. Developed in Daylight Laboratory at the University of Michigan. Kimble Glass Co., Ohio Bank Bldg., Toledo 1, Ohio.

Door Closer Selector: new perforated slide calculator determines correct size in each of manufacturer's concealed and exposed types of closers which will effectively handle a door with given width and location. Data for exterior doors appear on one side of calculator, data for interior doors on reverse side. Available without charge from manufacturer. LCN Closers, Inc., Princeton, Ill.

Dusklite: new shatterproof flat glass is composed of two layers of window glass laminated with inner layer of neutral gray vinyl plastic. Provides light control for ribbon windows and ventilator units used in conjunction with functional glass block installations in schools and other buildings. Visible light transmittance approximately 25%; solar heat transmittance approximately 50%. Standard 7/32″ thickness, sizes up to 15 sq ft. Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh, Pa.

Black-Light Unit: weatherproof black-light fixture for illumination of outdoor signs and billboards employs two self-filtering long-wave ultra-violet tubes with specially designed reflector. Fewer fixtures required per lineal foot of copy. Units available with two 150-w white flood-type bulbs; intermittent flasher may be installed in base if specified. Ultra-Violet Products, Inc., 145 Pasadena Ave., South Pasadena, Calif.

Ualco Awning Window: weather-tight aluminum awning window provides special

when most of the elevator traffic in an office building is in the up direction, the control automatically shifts the method of operation to provide the maximum of upward service and readjusts itself through the 24 hours of the day to meet all other traffic demand. Before this system was developed, an elevator starter had to control the elevators manually by setting a dial in order to meet changing traffic demands. With Automatic Traffic Pattern Control, the car loads (weight of passengers) are measured and the number of stops and calls are counted electronically. As the relationship of these elements changes with varying traffic conditions, the system automatically shifts to the traffic pattern that will most efficiently serve the indicated traffic demand. Savings in operating costs up to $7000 per car per year are possible.

lightweight building material introduced to U.S.

During the past 15 years more than 200 million sq ft of a lightweight mineral building material called "Zeprex" have been used in Europe as roof decking, walls, ceilings, and floors of various types of buildings (ranging from houses to large manufacturing plants). Composed of siliceous material, cement, and water, together with certain chemicals, this versatile structural material will now be manufactured in the U. S. in slabs 20″ wide, up to 18′ long, and with thicknesses varying from 2″ to 10″ depending upon the desired strength and insulation value.

Although strong, Zeprex at its most commonly-used density is only one-fifth the weight of concrete. Its unusual qualities include its high thermal insulation value and its similarity to wood—it can be nailed, drilled, and hand sawed. It is also incombustible, immune to termites, and practically free from shrinking or swelling.

Zeprex was developed in Sweden in the early 1930's and was first put into commercial production in 1934. At the present time it is being used in at least one of its forms in 50 percent of all new buildings erected in Sweden. It will now be manufactured in the U. S. by United States Plywood Corporation, priced to compete favorably with other building materials used for the same purposes.

night ventilation, employs automatically locking ventilators. Screens fit flush with inside window face. Standard or metal glazing. The Union Aluminum Co., Inc., Sheffield, Ala.

electrical equipment, lighting

V-C-U Corridor Light: new corridor lighting fixture for school and office installation will handle asymmetrical lighting requirements in wide halls and corridors. Broad side illumination; lengthwise, brightness is shielded by means of 45° x 45° plastic louvers. Available in 4′, 8′, and 16′ lengths, wired rapid-start, conventional or slimline, in 1 or 2 rows of light. The Edwin F. Guth Co., 2615 Washington Ave., St. Louis 3, Mo.

finishes and protectors

Colorflex Plus AWA: protective coating for floor surfaces resists alkali content of cement. Not affected by storage-battery acid, lactic acid, fruit or vegetable acid, and cannot be softened by water, mineral oils, grease, or gasoline. Synthetic resin base; colors: red, gray, brown, green, and clear. Flexrock Co., 3686 Cuthbert St., Philadelphia 1, Pa.

Nelsonite #31 Panel and Drawer Finish: improved finish is specifically formulated to give dimensional stability to drawers, cabinets, woodwork, interior doors, and other wood articles. Finish contains 30% solids and 2% wax. Water- and moisture-repellent, finish affords protection against most forms of wood distortion from age, heat, inclement weather, and humidity. Nelsonite Chemical Products, Inc., 900 Monroe Ave., N.W., Grand Rapids 2, Mich.

insulation (thermal, acoustic)

Flexible Duct Liner: new Fiberglas insulating product for lining interior of air-conditioning or warm-air ducts has high noise reduction efficiency, thermal insulating properties. When used inside ducts material allows metal surface to act as vapor barrier, preventing condensation on those ducts carrying cool air through areas of high humidity. May be installed on metal sheets before they are bent to form ducts. Sprayed with light coating of fire-safe neoprene to prevent erosion and to reduce frictional losses. Owens-Corning Fiberglas Corp., Nicholas Bldg., Toledo 1, Ohio.

sanitation, water supply, plumbing

Pilot Shower Cabinet: shower cabinet, 75″ high, has bonderized, galvanized steel walls, baked-on synthetic enamel finish. Reversible panel feature allows installation of valves either at left or right without drilling. Units are particularly suited to installation in low-cost housing projects, tourist cabins, summer camps, motels, and for basement and utility installations in city and country homes. Fiat Metal Mfg. Co., Long Island City 1, N. Y.

Incinor: new incinerator for commercial use uses LP, manufactured, natural, or mixed gases at rate of 50,060 BTU per hour input. Twin-burner unit has four-bushel capacity, ¼-in. steel-plate combustion chamber. 44″ high, 28″ wide, weighs 336 lbs. Bowser, Inc., Incineration Div., Cairo, Ill.

specialized equipment

Plastic Ink: new carbon ink showed strong wear and heat stability in tests made by manufacturer. Good adhesion on glass, smooth cellulose acetate, cellulose nitrate, methacrylate, and numerous water-repellent smooth plastic surfaces is claimed. Work done with ink can be rendered water resistant by brief heat cure at 180 F. Also recommended for general purpose drawing. Electrochemical Laboratories, 1430 Terrace Dr., Tulsa, Okla.

Republic Steel Kitchens: new line of adjustable-height kitchen units and accessories. Adjustable-shelf wall cabinets built in 17 sizes and styles. Cabinet sinks, sink fronts, and undersink cabinets in 34 different styles suited for any size kitchen. Metal-to-metal contact eliminated by use of nylon drawer slides and plastic bumpers. "Perma-Finish" enamel; work surfaces available in 16 Formica colors. Republic Steel Corp., Berger Mfg. Div., Canton, Ohio.

surfacing materials

Kenflex: new multi-purpose vinyl-asbestos tile is available in 14 colors. Flooring is greaseproof, alkali-proof, fire-resistant, and resistant to acids, cooking fats, oils, and gasoline. 9″ x 9″ tiles in two thicknesses: standard and ⅛″. Feature strip, in any of four colors, measures 1″ x 24″. Kentile, Inc., Brooklyn 1, N. Y.

Red Chief Quarry Tile: flint quarry tile is acid-, grease-, vermin-, and weather-proof. Most often used as flooring material in public buildings, hospitals, cafeterias and restaurant kitchens, rest rooms, patios, and porches. Manufactured in 6″ x 6″ x ½″ squares. Royal Tile Mfg. Co., Ft. Worth, Tex.

p/a manufacturers' literature

★ *Editor's Note: Items starred are particularly noteworthy, due to immediate and widespread interest in their contents, to the conciseness and clarity with which information is presented, to announcement of a new, important product, or to some other factor which makes them especially valuable.*

air and temperature control

1-15. A Story of Radiant Heating and Radiant Cooling (A-109), 4-p. bulletin giving information on a ceiling of prefabricated, perforated-metal panels clipped into coil system which heats or cools radiantly. Acoustical and thermal insulation also provided by acousti-thermal blanket placed above heating coils. Uniform temperatures maintained from floor to ceiling with minimum variation. Photo, cutaways. Burgess-Manning Co., Architectural Products Div., 5970 Northwest Highway, Chicago 31, Ill.

1-16. Clipper Specification Sheets (A.I.A. 30-B-1), 4 2-p. sheets listing features of two forced-air gas furnaces, gas-fired winter air conditioner, and vented recessed heater. Specifications, standard equipment, performance and dimensional data. Photos, drawings, and charts. Clipper Wholesale Corp., Sebastopol, Calif. Manufactured by Henderson Furnace & Mfg. Corp., Sebastopol, Calif.

1-17. Home Heating Equipment (A645H), 24-p. catalog describing Blend-Air heating and cooling equipment including oil, gas, and LP-gas furnaces; in addition, floor furnaces, wall heaters, and water heaters. Detailed information on heating method completely designed as a small-pipe system. Installation procedure, specifications on equipment, cutaway drawings with detailed captions, dimension data, photos. The Coleman Co., Inc., 2 and St. Francis Sts., Wichita 1, Kan.

1-18. Air-Wall Home-Heating System (SP39-2184), 6-p. brochure describing a warm-air radiant heating system. Ducts may be installed in slab floors, crawl spaces, waste attic spaces, or between basement joists. Cutaway drawing shows furnace (oil or gas), plenum chamber, duct system, registers, room thermostat, and return-air grilles. Photos of control equipment, standard and automatic registers, furnaces. General Electric Co., Lawrence St., Bloomfield, N. J.

construction

2-23. Building Products (P855), 8-p. booklet describing line of asphalt shingles, built-up roofings, rock-wool insulation, building papers, damp-resistant coatings, and roll roofings. Photos of shingles showing available colors and patterns. Specifications and photos of other products. Allied Chemical & Dye Corp., The Barrett Div., 40 Rector St., New York 6, N. Y.

2-24. Colorbestos Siding Sheets, A.I.A. 12-F-1 (AS-90A), 8-p. brochure in color containing data and illustrations on asbestos building material which combines pattern and color for residential siding use. Seven colors; vertical ribbed pattern. Illustrations of completed houses, details showing handling of material around doors, windows, gable ends, soffits, and similar places. Johns-Manville Corp., 22 E. 40 St., New York 16, N. Y.

2-25. Swimming Pool Construction Portfolio, A.I.A. 35-F-2. Kit includes bulletins on public pools, construction of pools, and on pool accessories and equipment. Engineered typical plans for form-poured, gunite, and concrete-block pools. Photos, drawings, price lists. Landon Inc., 5920 Sepulveda Blvd., Van Nuys, Calif.

2-26. Philippine Mahogany for Commercial-Industrial Building, 18-p. brochure describing use of Philippine mahogany for schools, churches, office buildings, hotels, clubs, and restaurants. Color and black-and-white photos of installations, color chart of available finishes. Philippine Mahogany Assn., Inc., 111 W. 7 St., Los Angeles 14, Calif.

2-27. Unit Deck, 6-p. bulletin describing red cedar deck for roofs, side walls, partitions, floors, and ceilings. Available in premium, standard, and commercial grades, specified lengths of 8′ to 16′. Graph showing high load strength, description of advantages, chart comparing insulating value of product with other types of roof construction. Drawings, specifications. Unit Structures, Inc., Peshtigo, Wisc.

doors and windows

Jalousie windows, doors, and enclosures have been manufactured since the early 1930's and through development and improvement, the industry in Greater Miami alone has grown to an annual $30,000,000 gross business. Aluminum, rather than wood, is now being widely used for frames and, to a certain extent, for slats although glass is the most often used slat material. All combinations of wood, glass, and aluminum are still obtainable. The following manufacturers have available literature on their products:

3-20. Glass Jalousie Windows. Adams Engineering Co., 19300 Biscayne Blvd., Miami, Fla.

3-21. Arnold Products. Arnold Products, Inc., P. O. Box 71, Little River Station, Miami 38, Fla.

3-22. Win-Dor Approved Jalousies. The Casement Hardware Co., 406 N. Wood St., Chicago, Ill.

3-23. Glass Louver Windows and Doors. Clearview Louver Window Corp., 3318 S. W. 2 Ave., Ft. Lauderdale, Fla.

3-24. Porch Enclosures. Ludman Corp., P. O. Box 4541, Miami, Fla.

3-25. Jal-O-Vent. Miami Aluminum Products, Inc., 3110 N. E. 2 Ave., Miami, Fla.

3-26. Pro-Tect-U Jalousies. Pro-Tect-U Jalousie Corp., 4525 Ponce de Leon Blvd., Coral Gables 34, Fla.

3-27. Air-Controlled Louvered Windows. Sun-Sash Co., 38 Park Row, New York, N. Y.

3-28. Jalousie Window and Door Folio. Tropical Awning Shutter and Jalousie Co., 7140 N. W. 7 Ave., Miami, Fla.

3-29. Van Ness Louvre Windows. Van Ness Louvre Co., 8354 San Fernando Rd., Sun Valley, Calif.

3-30. Weathermaster Jalousie Windows, A.I.A. 16-L. Weathermaster Jalousie Windows, 1890 N. E. 146 St., North Miami, Fla.

★ **3-31. Forty Garage Door Designs,** 28-p. brochure showing unusual garage door designs including 6 prize winners chosen by a jury composed of C. Gordon De Swarte, Structural Engineer; John Entenza, Editor, *Arts and Architecture;* John Rex, Architect; Hunt Lewis, Industrial Designer; and S. Glenn Varley, Tavart Co.; rendering, detailed drawings, general description, information on materials of each. Tavart Co., Paramount, Calif.

electrical equipment, lighting

4-15. Mobilex, A.I.A. 31-F-2 (OD-567R), 4-p. bulletin describing recess-lighting system designed for grid-type suspended ceilings consisting of interlocked tees spaced 24″ x 24″ or 24″ x 48″ center to center, supporting Fiberglas ceiling board. Available in two sizes: 2′ x 2′, and 2′ x 4′; 3 lamp arrangements: 2-, 3-, and 4-lamp fluorescent. Glass, plastic, and louvered frames. Photos, various patterns of light, drawings. Day-Brite Lighting, Inc., 5411 Bulwer Ave., St. Louis 7, Mo.

4-16. New Forms in Accentlights, A.I.A. 31-F-152, 24-p. catalog of lighting equipment including recessed and ceiling- and wall-mounted fixtures, dome lights, floor and table lamps, recessed or surface and pendant fluorescent or slimline units, Swedish Modern lamps. Photo and dimensional drawing of each unit with general description and lamp wattage. Color chart. General Lighting Co., 1527 Charlotte St., New York 60, N. Y.

4-17. Astra-Lite Unitized System of Fluorescent Lighting, A.I.A. 31-F-2 (RL253), 8-p. booklet describing a series of fluorescent luminaires for commercial, industrial, and institutional uses. Two-lamp steel luminaire available in lengths from 4′ to 8′, bi-pin or slimline style, louvered or unlouvered. Square unit (illuminated, non-illuminated, or gimbal-ring spot) serves as connector, corner, or intersections. Photos, lighting calculator, drawings, mounting details. Metalcraft Prod-

ucts Co., Inc., Mascher & Lippincott Sts., Philadelphia 33, Pa.

finishers and protectors

5-6. Trisco System, A.I.A. 7-A, 4-p. bulletin giving information on method of applying a high-cohesion dense sealer to masonry mortar joints. Excessive breathing, over-expansion and attendant fracturing and moisture infiltration are controlled. Specifications for mortar seal finish on new brick buildings and flexible-bond finish on new stone buildings. Cutaway drawings, photos. Trisco Waterproofing Co., Lima, Ohio.

5-7. Better Maintenance, 6-p. folder describing line of maintenance paints for exterior and interior use. Twelve products include factory glass cleaner, chain link fence paint, heat-resisting interior and exterior aluminum paint, and rubber-base concrete floor enamel. Description of advantages, price information. The Skybryte Co., 3125 Perkins Ave., Cleveland 14, Ohio.

5-8. Apex Anti-Rust Paint (L-6976), 2-p. catalog sheet. Advantages of one-coat rust-proof finish paint available in clear, aluminum, black, gray, green, and red. Requires no surface preparation. Seven application photos. Paramount Industrial Products Co., University Center Station, Cleveland 6, Ohio.

insulation (thermal, acoustic)

6-8. Rock-Wool Insulation (R-837), 8-p. booklet describing rock wool insulating material. Information on where to insulate for steep- and flat-roofed houses. Heat-loss comparisons through each portion of house. Photos, drawings, cost information. Allied Chemical & Dye Corp., Barrett Div., 40 Rector St., New York 5, N. Y.

★ **6-9. Acoustical Handbook for Architects and Spec Writers,** 30-p. work manual designed to aid in the selection and specification of sound control materials. Detailed information on acoustical tile, erection methods and systems, sound isolation, and maintenance of acoustical ceilings. Materials and erection systems discussed, followed by suggested specifications and detailed drawings of erection methods. Indexed. Waldvogel Bros., Inc., 17 E. 42 St., New York 17, N. Y.

sanitation, water supply, plumbing

7-4. Protection of Plumbing Fixtures, A.I.A. 29-H, 4-p. folder describing methods by which plumbing fixtures may be protected against abuse during building construction. Suggestions on the proper procedure in preventing damage are illustrated. Six illustrations show effects of carelessness. Recommended paragraphs to be included in architects' and builders' specifications. Enameled Cast Iron Plumbing Fixtures Assn., Vitreous China Plumbing Fixtures Assn., 1709 M St., N.W., Washington 6, D. C.

7-5. Long-Life Refrigeration from Inexpensive Steam (2ACP-88-308), 8-p. booklet on absorption-type 25-ton water chiller; hermetically-sealed, no moving parts. For industrial and commercial air conditioning and manufacturing process, designed for installation in multiples for large tonnage applications. Specification and application data, photos, drawings. Servel, Inc., Air Conditioning Dept., Evansville 20, Ind.

specialized equipment

8-12. Austral Multi-Use Blackboard Fixture, 12-p. brochure describing reversible panels with blackboard and cork sides. Also available with both sides blackboard or cork. Illustrations show uses as display board, art easel, display shelf and work board, and corridor exhibition board. Specifications, detailed drawings showing applications to standard plastered walls. Austral Sales Corp., 101 Park Ave., New York 17, N. Y.

8-13. Reflecting Beauty with Medicine Cabinets (50), 10-p. catalog illustrating various types of steel medicine cabinets with or without fluorescent lighting. Also framed wall mirrors and clothes chute doors. Photos of models, wiring diagram. The Bennett Mfg. Co., Alden, N. Y.

8-14. Classroom Wardrobes, A.I.A 28-B-33, 8-p. catalog on complete line of school wardrobe units. Single- and multiple- operated receding types and pivot type; doors may be equipped with slate blackboard. Also, teacher closets, supply closets, and bookcases. Specifications, detailed drawings, photos. Equipment Mfg. Co., Inc., 1208-10 E. 9 St., Kansas City 6, Mo.

surfacing materials

9-7. Fremont Rubber Tile (1130) 4-p. folder showing available colors of rubber tile available in sizes 6" x 6", 9" x 9", 12" x 12", and special sizes. Gages: 3/16", 1/8", 3/32", and .080. Recommended installation procedure, specifications suggested for use over concrete and wood sub-floors. Also, description of rubber-tile adhesive, vinyl-plastic cove base, sponge-rubber rug cushion. Fremont Rubber Co., 311 McPherson Highway, Fremont, Ohio.

vertical traffic

10-1. Faster Food and Dish Handling (749), 22-p. brochure describing conveyor for food and dish trays between kitchen or dishwashing departments and serving floors in hotels, clubs, hospitals, and similar institutions. Illustrations of single-duty models for ascending service, descending service, or reversible style for up or down service. Unit for carrying trays in both directions simultaneously also available. Specifications and design features of various models, typical arrangements, cutaway drawings, photos. Lamson Corp., Syracuse 1, N. Y.

(To obtain literature, coupon must be used by 8/1/53.)

(We request students to send their inquiries directly to the manufacturers.)

PROGRESSIVE ARCHITECTURE, 330 West 42nd Street, New York 36, N. Y.
I should like a copy of each piece of Manufacturers' Literature circled below.

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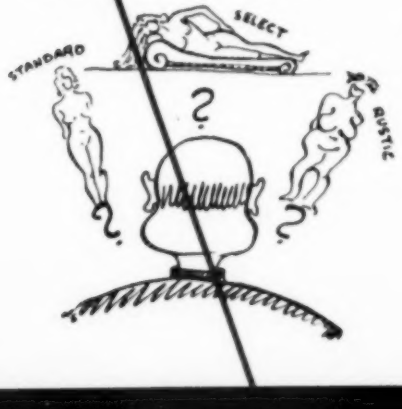
by Ben John Small

spec small talk

selecting "select" stone

Perhaps you missed the following Indiana Limestone Institute story. I think you will find it a useful reminder. Today's cost of construction is so high that any price advantage—without sacrifice of quality, durability, or structural value—must, of course, appeal immediately to every architect. It is for this reason that we regret having left some architects—apparently a surprising number of them—with an incomplete understanding of the classification terms which are applied to Indiana Oolitic limestone. These terms are "Select," "Standard," and "Rustic." They are properly employed in connection with either Buff or Gray stone specifications. Use of the "Select" stone should be confined to those portions of any structure within the reach of normal vision—interiors, entrances, molded window trim, and carvings in the first and second stories. Use of the "Standard" stone should be made in the next two or three stories. And "Rustic" stone should comprise the remainder of the structure. Generally speaking—and avoiding any reference to technical language—the three classifications differ in only one respect: the "Select" stone possesses a finer grain and less noticeable natural markings than the "Standard" and "Rustic." The more expensive "Select" stone possesses no more structural strength, no more durability, and no more resistance to the elements than do the "Standard" and the "Rustic." Why, then, is it necessary to ask a higher price for the "Select" than for the other two classifications? Simply because, when specifications call for "Select" throughout (often even to the inclusion of parapets and roof copings), a great deal of extra quarrying and handling by the quarryman and cut-stone contractor is required—for the procurable quantity of "Select" stone is relatively small. It requires but brief reflection to realize that acceptance of these statements and suggestions will in no way operate to the impairment of the beauty, structural strength, or durability of any Indiana limestone building, but will contribute to the attainment of a highly satisfactory completed product at lower cost.



spex hex

I have liquidated my London correspondent for failing to indoctrinate the principles of streamlining. His gross negligence has led to a report in the British Medical Journal which offered this sober assurance to Christmas celebrants who kiss under the mistletoe: "The full-blooded, passionate kiss, in which lips are applied to lips with a varying degree of pressure and lasting for a very variable length of time, necessarily involves some exchange of salivary bacteria between the two persons concerned. The risks of kissing, although admittedly serious, can be much exaggerated, and in connection with some infections they are probably little greater than those of lesser degrees of proximity to the infected person." Can you blame me?

the pan plan plopped

This anecdote properly should be entitled "The Birth of the Tin-Pan Ceiling." Not that it is, but it could very well have inspired some inventive architect. A 35-year-old industrial building suffered from roof leaks, which grew increasingly worse with the passing of time. The roof assembly consisted of a poured-concrete slab over which was a thick layer of cinder fill employed as combination insulation and gradient for roof drainage, then a cement-mortar bed for five-ply roofing, which was topped with a cement-mortar wearing surface. As roof leaks developed, the owner installed under each leak spot a metal drip pan suspended from the ceiling. He drained each pan with a pipe extending from the pan to the nearest wall or partition. The pans eventually increased in number and worse yet in form, which included squares, rectangles, T-, and L- shapes, and so on. By and by, over 20 percent of the concrete ceiling was covered with the tin pans, until no one could bear it any longer. Eventually new roofing was installed and the pan plan plopped. It may be interesting to note that prior to the reroofing job, which was undertaken reluctantly because of the huge areas involved, various remedial expedients were tried. The most nearly successful measure was a venting system whereby 12" round sheet metal ventilators, some of which were of the gooseneck type, were installed on the roof about 25 feet apart, in a line and extending down to the concrete slab. These vents served to dry out the trapped moisture which saturated the cinder fill insulation. Moral: 'tis better to vent your insulation now than your spleen later!

or equal

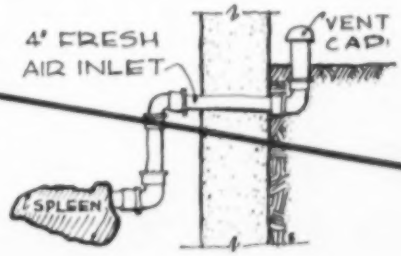
To the best of my knowledge, here is a statement that most certainly never got stated in this country. A client asked us to solicit prices from Great Britain for certain classes of construction products. I wrote to many British manufacturers of building products and asked them among other things to name at least two other manufacturers of similar products whom they would consider fair and equitable competition. A paint manufacturer responded "we can say straight away that 99.9% of British paint manufacturers can be placed in this category." Pratt, Lambert, Devoe, Raynolds, DuPont, are you there? hello! someone help me pick them up—get some water—no, turps would be better!

by line

I do not mean to reopen the argument regarding the architect's name chiseled permanently into the face of his brain child, but here is a tale that makes one stop and ponder. Not so long ago, I was oh-ing and ah-ing over the condition of a 70-year-old roof on a 10-story hotel in New York that never required, I was solemnly assured, so much as a red cent for maintenance. There was nothing particularly special about the roofing. It was a standard 5-ply coal-tar pitch and felt installation with a common-brick wearing course set in cement mortar sans expansion joints, sans cracks, sans heaving, sans sans. What startled me was a cast-iron nameplate set in the brick paving bearing the legend "Tobias New Patented Roof Construction." It was dated 1874, the year of the patent grant. Well, don't just sit there, go label your cornerstone!

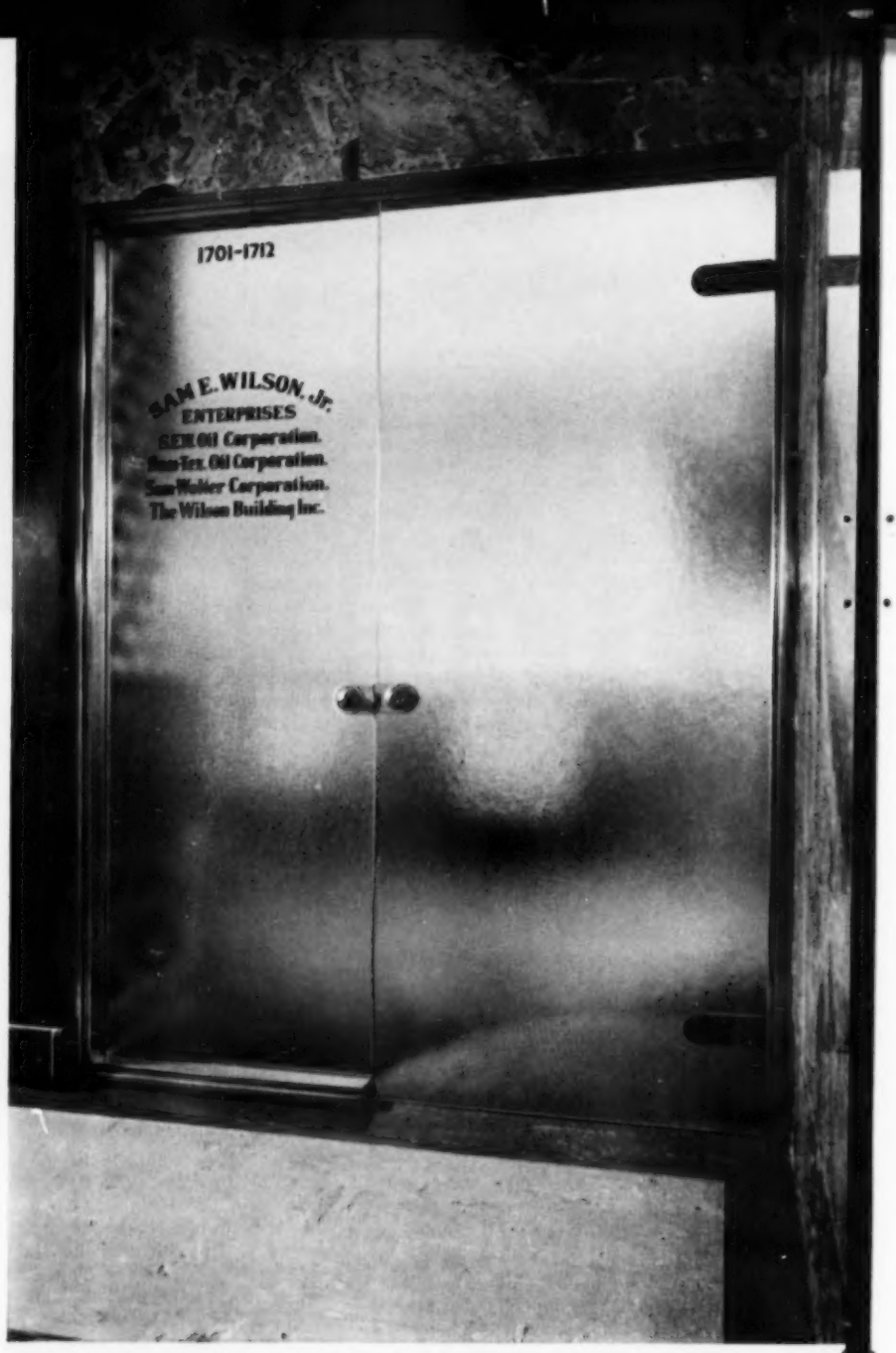
granitized marble

As if life were not complicated enough for those of us who slave over a hot specification all day, along comes the Vermont Marble Company with a brochure on genuine granite veneer. Anybody would know that a marble company sells granite which is really not a marble—it is—never mind!



Decorate with a door?

sure...look →



Architect: Walter W. Ahlschlager, Dallas, Texas

Step up to a door like this and you can't help but admire it. It's more than an entrance—it's a pleasant introduction. It reflects good taste on the part of the architect, the decorator and the owner.

This is a Blue Ridge *Securit** Interior Glass Door. It is a single piece of translucent glass which matches the fixed panel of Muralex *Patterned Glass* alongside it.

Beautiful—and equally practical. Here's why:

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The translucent glass lets light through to brighten rooms. Yet the pattern provides privacy.

The *Securit* Door is easy to hang. No cutting, planing or painting. Everything comes to the job with the door—beautiful hardware and ball-bearing hinges. When specified, the door can be shipped with a Sargent closer or prepared for use with an LCN concealed closer.

The cost? It compares favorably with high-quality doors of other materials—and you make important savings in installation time and costs.

No longer need doors be just something to let people in and out. Make them highlights of beauty in your decorating plan—with Blue Ridge *Securit* Interior Glass Doors. Your L·O·F Glass Distributor or Dealer can tell you more about it. He's listed in the yellow pages of phone books in many principal cities. Or mail the coupon for further information.

*®

BRIEF DATA

Glass—3/8" thick. Muralex pattern on both surfaces.

Tempered—3 to 5 times stronger than untempered glass of same thickness.

Reversible—can be used right or left hand.

Standard Sizes—2'6" x 6'8" 3'0" x 6'8"
2'8" x 6'8" 3'0" x 7'0"

—also 4 sizes for openings of these dimensions with proper allowance for clearances.

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banks

A completely new attitude has invaded the banking business—that of being friendly. All of the fresh new color, the lighting, and the comfortable furnishings, show that bankers have had an awakening. What a relief to see the passing of the old teller's cages! Whether the thought came first—or progressive design has helped create this atmosphere—is not important. The fact that it exists is.

On the following pages are four banks entirely different in interior design, but throughout the section immediately obvious is one prevailing quality—no matter what the location or size—that of openness of design. Though they are of different character, each has avoided the clichés that have thwarted interior design in banks for years. Basically, of course, bankers have been ultraconservative and, in the past, there seemed to be an agreement to give bank interiors a pompous, impersonal atmosphere. Even now, it is possible to see banks of contemporary design filled with outmoded, stuffy furnishings. Fortunately, they are becoming fewer in number.

The largest of the banks selected this month is on a busy corner in Manhattan, a remodeled interior. Its size is not overwhelming, nor is it cold and impersonal. One's impression upon entering is that here is a successful, confidence-inspiring company. It is attractive, yet businesslike. The colors—black, white, and gray—are subdued and clear; the lighting is bright and cheerful, without its sources being evident; and the space division is uncluttered, orderly, and open. Another New York bank, in the UN Secretariat, is small in scale. It, too, has a clean, uncluttered look. Particularly eye-pleasing is the curved counter and straight plane storage wall of flush wood veneer behind it. This creates an appearance of intimacy, combined with great dignity.

The third bank, the Desert Bank in California, is a small branch bank—completely in character with the surrounding territory, but with cool color as a relief from the bright sunlight out-of-doors. The other small bank, in Maine, is informal in a more sophisticated way. Made in a circular form to permit drive-in banking, it is completely unorthodox as banking design goes. The entire vault wall is done in a mural of many colors, depicting numerals and percentages in arithmetical procedures arranged in an attractive design.

banks

location	York National Bank, Old Orchard Beach, Maine
architect	Carl Koch & Associates
associate architect	Leon Lipshutz

luminous ceiling

wall mural

Planned to be a drive-in bank as well as over-the-counter, a circular scheme seemed the most logical solution. One teller may serve alone and handle both operations. The vault was considered the most important feature, so the amusing and effective (porcelain enamel) mural was planned for it, and all other surfaces were done in an inconspicuous manner. A neat yet refreshing and attractive result has been achieved.

Photos: Ezra Stoller

data

cabinetwork

Teller's Counter: designed by architect/ executed by J. G. Deering & Son, Biddeford, Me.

doors and windows

Door Hardware: Schlage Lock Co., 2201 Bayshore Blvd., San Francisco, Calif.

Window Glass: "Thermopane"/ Libby-Owens-Ford Glass Co., Room 1038-T, Nicholas Bldg., Toledo, Ohio

furniture and furnishings

Chairs: #6002/ Herman Miller Furniture Co., Zeeland, Michigan

Tables: #2116/ M. Singer & Co., 36 E. 19 St., New York, N. Y.

lighting

Downlights: #350/ Century Lighting Inc., 521 W. 43 St., New York, N. Y.

Luminous Ceiling: "Marlux ceiling"/ corrugated, translucent plastic/ Martin Electric Products, Inc., 346 Somerville Ave., Somerville 43, Mass.

mural

Vault Exterior: designed and executed in porcelain enameled steel, by Gyorgy Kepes

walls, ceiling, flooring

Walls: painted plaster

Ceiling: wood battens/ J. G. Deering & Son, Biddeford, Me.

Flooring: rubber tile/ Hood Rubber Co. Division of B. F. Goodrich Co., 97 Nichols Ave., Watertown, Mass.

batten ceiling

rubber tile

banks

location | Desert Bank, Cathedral City, California
architects | Clark & Frey

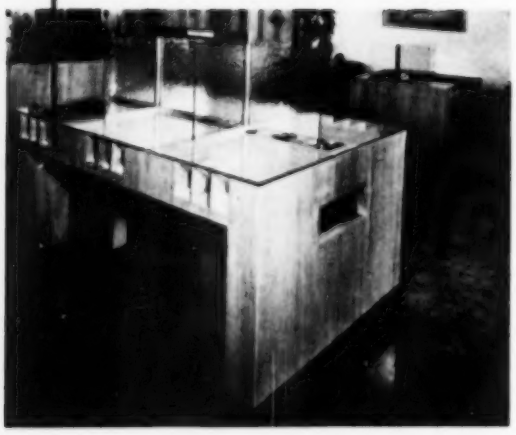
crafts display

indoor plantings

cove lighting

check desk

bleached-walnut



The directors of this bank in a resort community wanted a friendly, informal atmosphere. The architects and interior designers have achieved this aim. There is a small lounge area, which encourages people to stop and chat with their friends, and a display of native crafts adds to the informality. Combined with sage green walls for eye rest from the desert glare, bleached casework with glass screens, and large glass windows, are indoor plantings to contribute to the over-all effect. Particularly attractive are the architect-designed check writing desks.

Photos: D. J. Higgins

data

cabinetwork

Tellers' Windows, Check Desks: custom design, Clark & Frey

Sliding-Door Hardware: Grant Pulley & Hardware Co., 31-95 Whitestone Parkway, Flushing, L. I., N. Y.

doors and windows

Doors: "Herculite" tempered plate glass/ Pittsburgh Plate Glass Co., 2166-2 Grant Bldg., Pittsburgh 9, Pa.

Door Hardware: "Plymouth"/ dull chrome/ Schlage Lock Co., 2201 Bayshore Blvd., San Francisco, Calif.

Windows: (north side) ¼" plate glass/ (east side) ¼" AKLO, hammered heat-absorbing/ Blue Ridge Glass Corp., Kingsport, Tenn.

lighting

Fluorescent Cove and Incandescent Flush Fixtures: General Lighting Co., Inc., 1527 Charlotte St., New York, N. Y.

walls, ceiling, flooring

Walls: painted plaster, brick

Ceiling: "Acousti-Celotex"/ The Celotex Corp., 120 S. La Salle St., Chicago 3, Ill.

Flooring: terra-cotta-colored cement

location | Bank of the Manhattan Company, 535 Fifth Ave., New York, New York

architects | Walker & Poor

In this alteration job, with drastic revisions to all spaces, the architects aimed for a design so simple and bold that it would seem like an unlabored solution, with careful incorporation of lighting and air-conditioning as integral elements of design. Aiding in this successful execution are soft pale-gray walls, black-and-white floor, and free-standing columns of white Vermont marble. Dark mahogany furthers the look of elegant simplicity.

Photos: Gottscho-Schleisner

data

cabinetwork

Counters: front-face and top in flush-face dark mahogany, deal plates of black Formica/ William Somerville, Inc., 166-172 E. 124 St., New York, N. Y.

Check Desks, Hand Rails: dark mahogany/ William Somerville, Inc.

furniture and furnishings

All Furniture: dark mahogany/ black leather used on upholstered pieces/ W. & J. Sloane, 575 Fifth Ave., New York, N. Y., and Smith & Watson, Inc., 20 E. 55 St., New York, N. Y.

Curtains: Fiberglas net/ Thortel Fireproof Fabrics, Inc., 101 Park Ave., New York, N. Y.

lighting

Circular Downlights: Rambusch Decorating Co., 40 W. 13 St., New York, N. Y.

Flush Recessed Strip Lighting: Modern Metal Mfg. Co., 217 Grand St., New York, N. Y.

sculpture

Relief Sculpture: cherry wood/ subject matter—original function of company, supplying water to Manhattan/ executed by Sidney Waugh

walls, ceiling, flooring

Walls: plaster/ painted

Ceiling: Sabinite acoustical plaster/ United States Gypsum Co., 300 W. Adams St., Chicago 6, Ill.

Flooring: terrazzo/ V. Foscato, Inc., 22-02 40th Ave., Long Island City, N. Y.

banks

Executed in limited space, to handle only banking needs of UN personnel, this is dignified and intimate, yet functional within a compact area. The curved counter area creates a wide space for work desks at one end of the room, and is an attractive form in an otherwise severely rectangular space. Deep-green leather upholstery, carpet, and walls, and golden wood tones produce a sympathetic scheme.

Photos: Gottscho-Schleisner

curved counter

rubber-tile flooring

data

cabinetwork

Counter: front face and top, flush-surface butternut/ John Langenbacher Co., Inc., 550 Barry St., Bronx 59, N. Y.

Check desk: butternut/ John Langenbacher Co., Inc.

furniture and furnishings

All furniture: walnut/ upholstery, dark-green leather/ Macey-Fowler, Inc., 305 E. 63 St., New York, N. Y.

Net Curtains: J. H. Thorp & Co., Inc., 250 Park Ave., New York, N. Y.

lighting

Recessed Downlights: louvered/ flush with ceiling/ Century Lighting Inc., 521 W. 43 St., New York, N. Y.

walls, ceiling, flooring

Walls: plaster

Storage Wall: butternut/ flush-surface sliding doors/ John Langenbacher Co., Inc.

Ceiling: Sabinite acoustical plaster/ United States Gypsum Co., 300 W. Adams St., Chicago 6, Ill.

Flooring: rubber tile/ black-and-gold/ The B. F. Goodrich Co., 448 S. Main St., Akron, Ohio

location | Chemical Bank & Trust Co., UN Secretariat, New York, New York

architects | Walker & Poor

behind-counter storage wall

so over last week-end I panelled his office in English Oak

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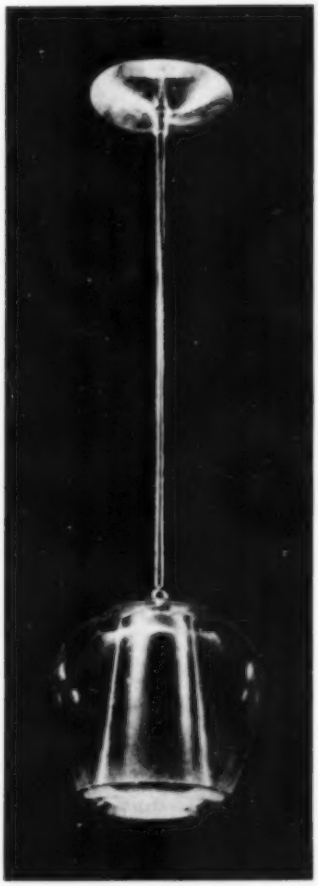

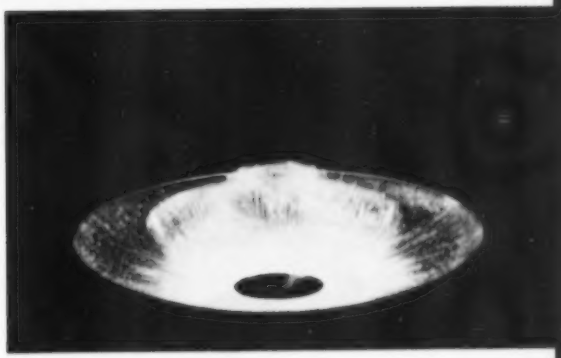

Lighting Fixtures: "Claremont" group/ combination of microscopic glass beads fused by hand on glass plate and polished brass/ glass is both translucent and refractive/ designed by Carl Moser/ #4221 downlight, 31-5/8" long/ **retail:** $32.75: #4224 bowl, 21-1/2" wide, 14-1/2" long/ **retail:** $44: #4227 indirect, 21-3/8" wide, 6-1/2" long/ **retail:** $37.50: #4238 Star/ available larger size for commercial installations/ 29" wide, 12-1/2" long/ **retail:** $66/ **Lightolier, Inc., 11 E. 36 St., New York, N. Y.**

Richmond Groceries Warehouse, Philadelphia, Pa.
Architect & Engineer: The Ballinger Co., Philadelphia.
General Contractor: George K. Heebner, Inc., Philadelphia.
Roof Deck Contractor: J. B. Eurell Co., Lansdowne, Pa.

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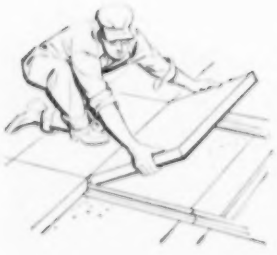
says CLEMENT J. STEFANOWICZ, *President, Richmond Groceries, Philadelphia, Pa.*



"We recommend Kaylo Roof Deck to other companies," says Mr. Stefanowicz, "because of our satisfactory experience with it in our modern warehouse." Mr. Stefanowicz likes the cool, pleasant conditions provided by Kaylo Insulating Roof Deck throughout the hot summer months . . . absolutely no spoilage of grocery products . . . greater employee efficiency.

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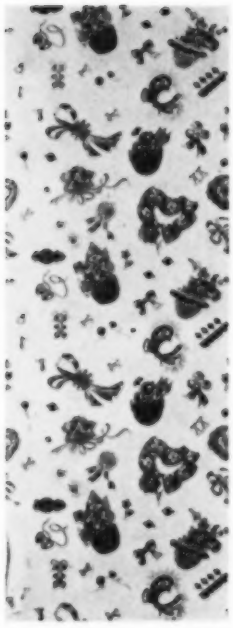
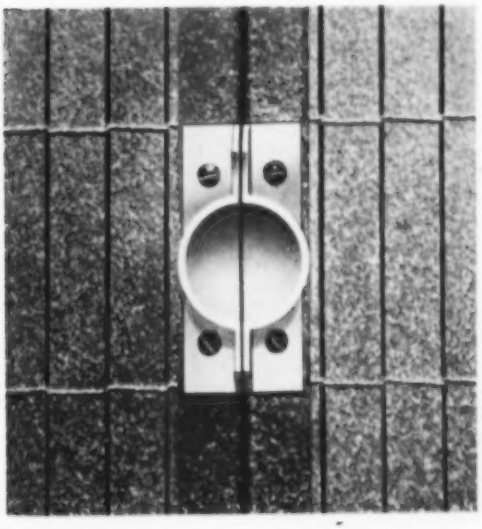
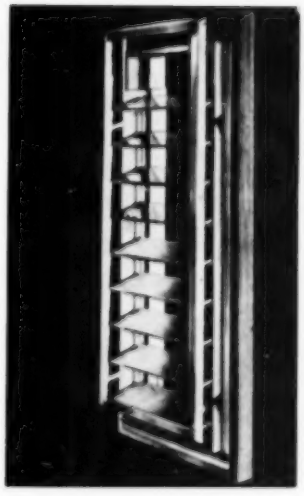


Fabric Wall Covering: "Stylon"/ hand printed/ designed for use in homes/ may be scrubbed without damage, will not fade in sunlight/ priced within range of hand-printed wallpapers/ **retail:** $7.95 and $8.95 a single roll/ **Wall Trends Inc., 509 Madison Ave., New York 22, N. Y.**

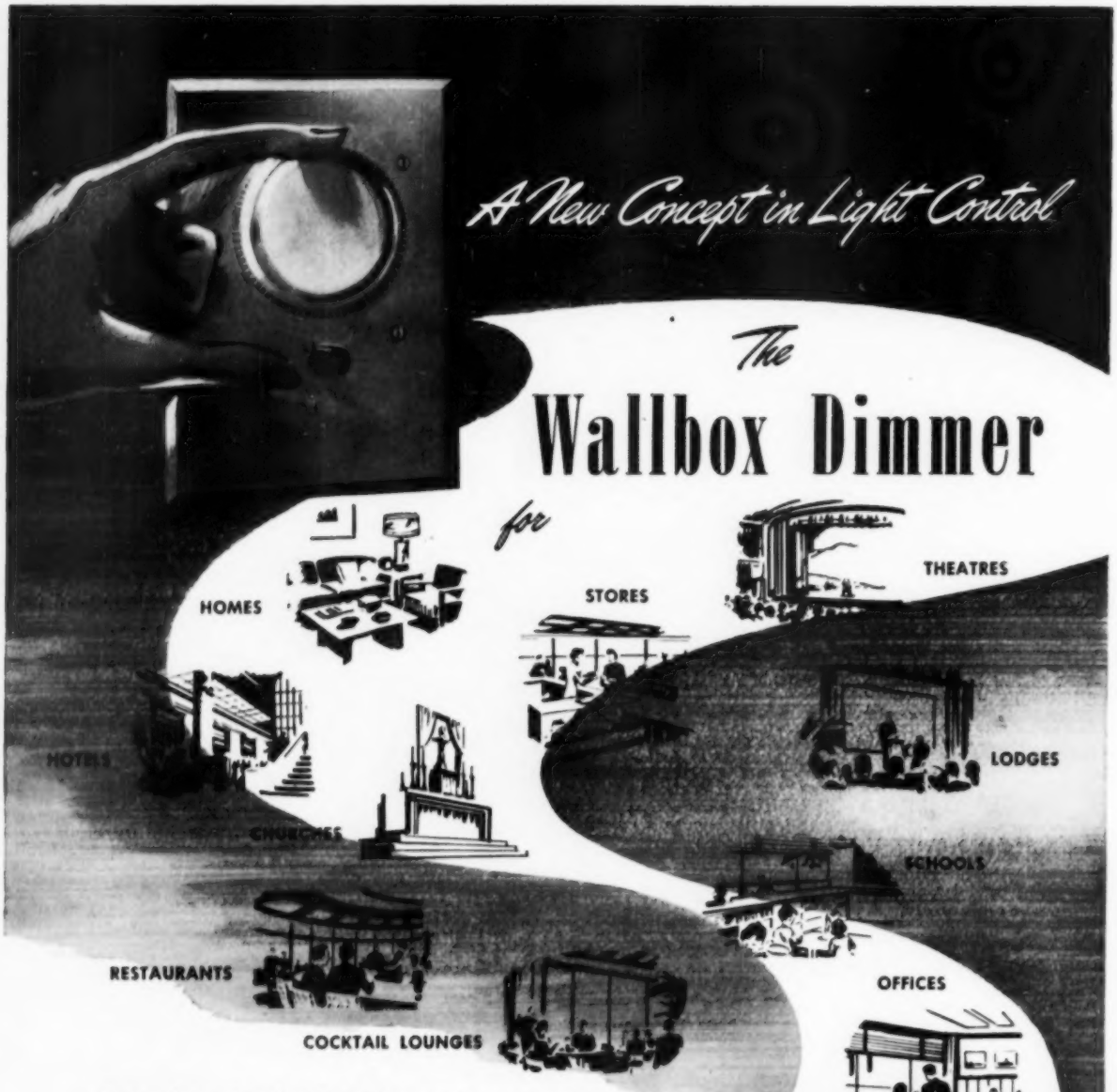


Folding Door: "Ra-Tex"/ basswood strips woven with seine twine/ available in new Cocoa Brown color/ stipple finish available in green-on-ivory and white-on-gray/ hardware designed by Walter Dorwin Teague Associates/ handle of molded phenolic plastic in light neutral gray/ for single and double doors/ **The Hough Shade Corporation, Janesville, Wis.**



Louvered Window: "Seal-Vent"/ designed for Northern climate, lifetime vinyl plastic weather-stripping developed by B. F. Goodrich Co./ provides a tighter closing than most casement windows/ .093 Alcoa Aluminum extrusion/ inside screens mounted flush/ has storm sash attachments/ **American Aluminum Products, Inc., Miami, Fla.**

Electric Ranges: "Spacemaker 24" and "Spacemaker 36"/ automatic pushbutton ranges/ narrow widths permit addition of storage units and counter top without loss of efficiency or cooking space/ Calrod ovens have extra width/ oven timer sets for desired time cooking is to end and length of time to cook/ **retail:** $229.95 and $254.95/ **General Electric, Major Appliance Division, 310 W. Liberty St., Louisville 2, Ky.**



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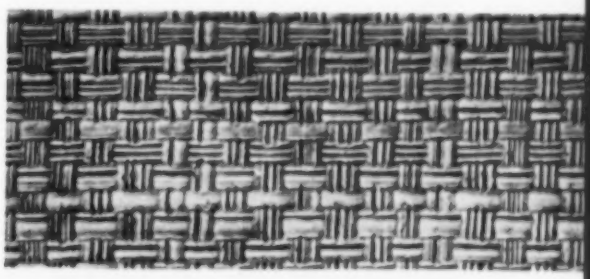
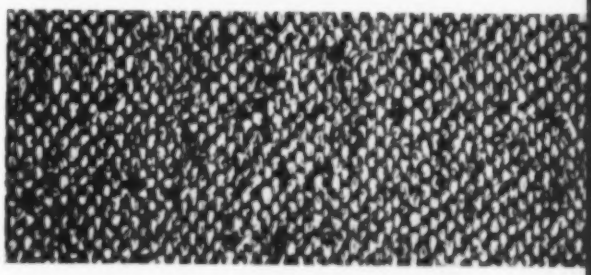
Ceiling Chandelier: #322/ lamp housings, brushed aluminum/ canopy and cord, flat black/ triangularly spaced, hung at 6" height differentials/ over-all length, 30"/ designed by Harry Gitlin/ **retail:** $57/ **Ledlin Lighting, Inc., 431 W. Broadway, New York 12, N. Y.**





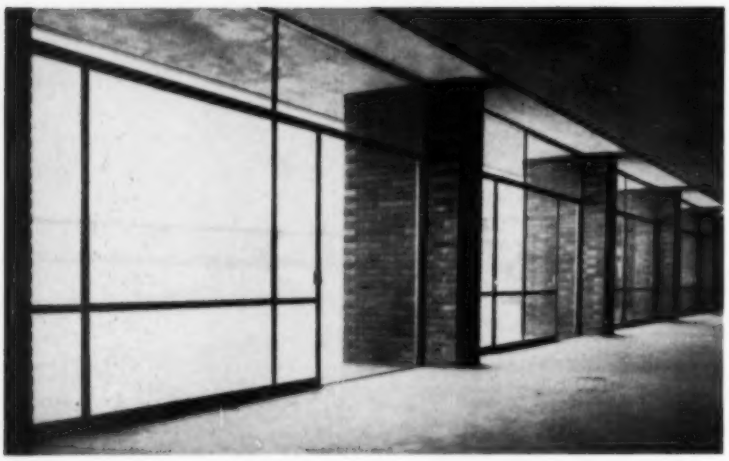
Textured Vinyl Fabrics: "Vicrtex V. E. F." (vinyl electronically fused)/ 3-dimension textures, Norfolk Briartweed, Wood Weave, and Irish Basket/ will not chip, scratch, peel, or crack; can be folded, pleated, or shaped; stain, soil, and flame-resistant/ need no backing or lining/ available in 28 fadeproof colors/ may be used for wall covering or upholstering/ 56" wide/ **retail:** $6.00 a yd./ **L. E. Carpenter & Co., Inc., Empire State Bldg., New York 1, N. Y.**

Console and Card Table: double top/ available in walnut or birch/ card table expands to 64"; console, 24" x 60", opens to 48" x 60"/ designed by Harold Bartos/ **retail:** console, $259; card, $229/ **Lehigh Furniture Corp., 16 E. 53 St., New York 22, N. Y.**

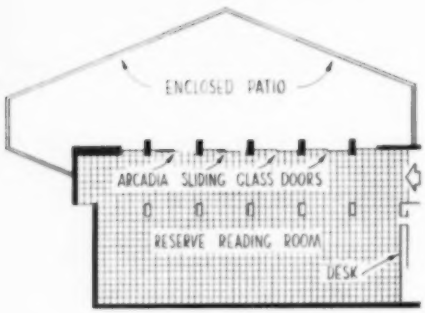
arcadia details no. 3 of a series

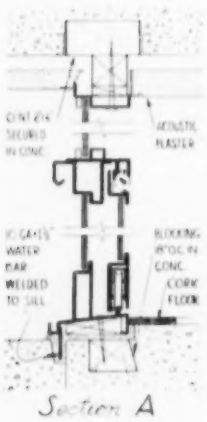
PHOTOS · J. DALE HEALY

sliding glass doors by Arcadia

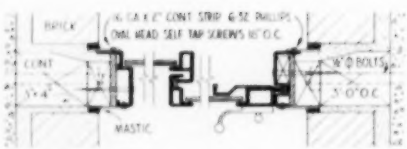


the finest in design, materials & operation





Section A



Section B

Large expanses of steel-framed Arcadia sliding glass units provide background of restful environment for modern learning at El Camino Jr. College. Arcadia units, used as entire wall of library reading room and across facade of administration building, reflect an established trend in contemporary school design. Ask Arcadia to help solve your school design problems.

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Marsh, Smith & Powell, Architects.

arcadia SLIDING GLASS DOORS

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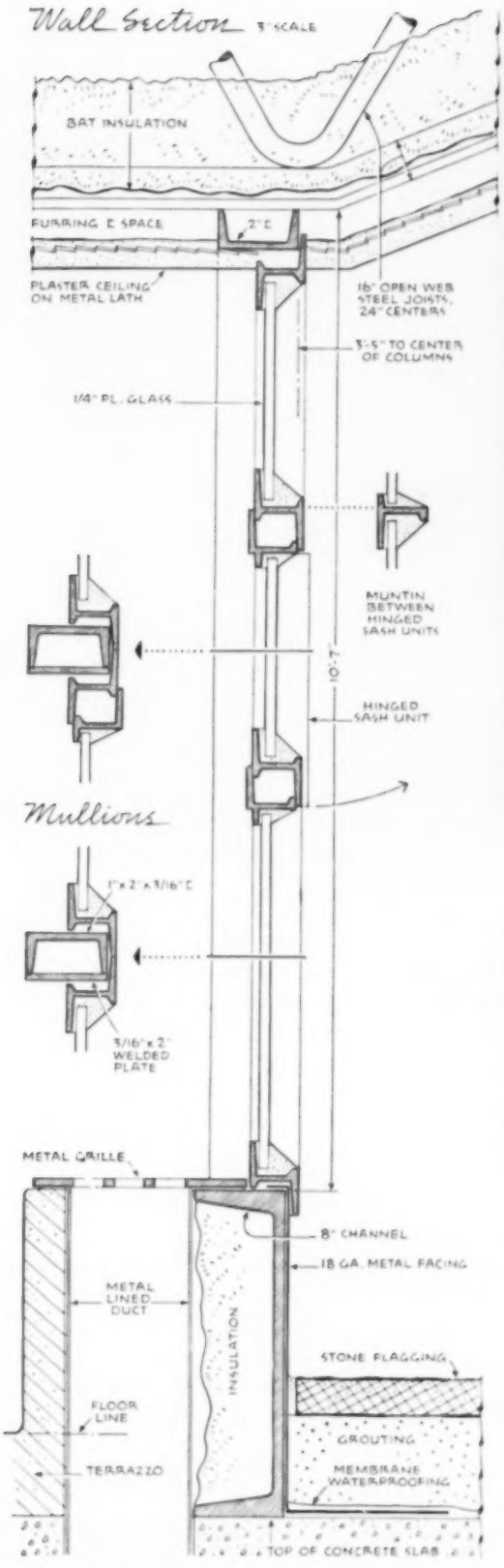
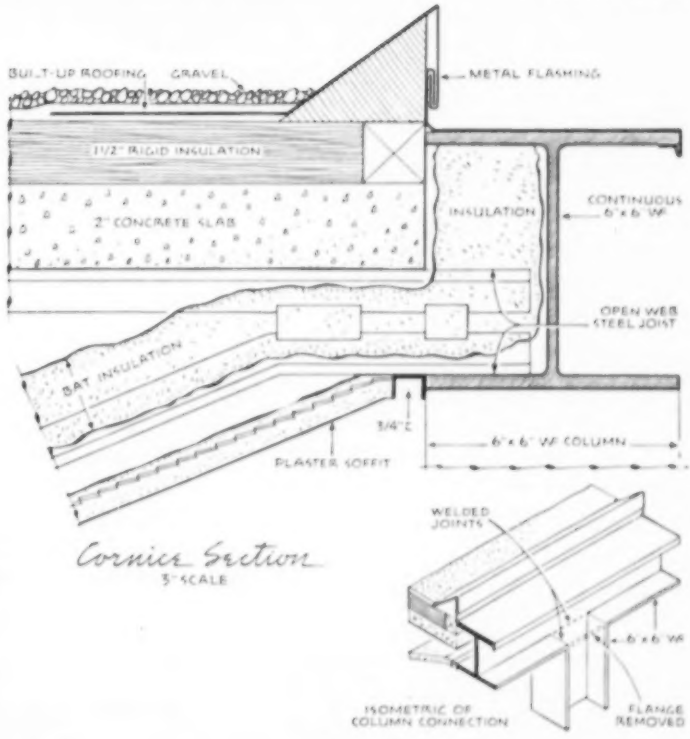
bank: loggia window wall

HEDRICH-BLESSING





OTTAWA SAVINGS AND LOAN ASSN., Holland, Mich.

Harry Weese, John Van der Meulen, and Bruce Adams, Architects

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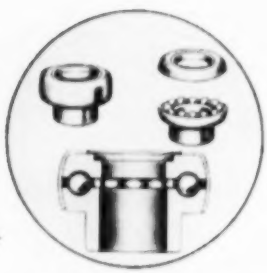

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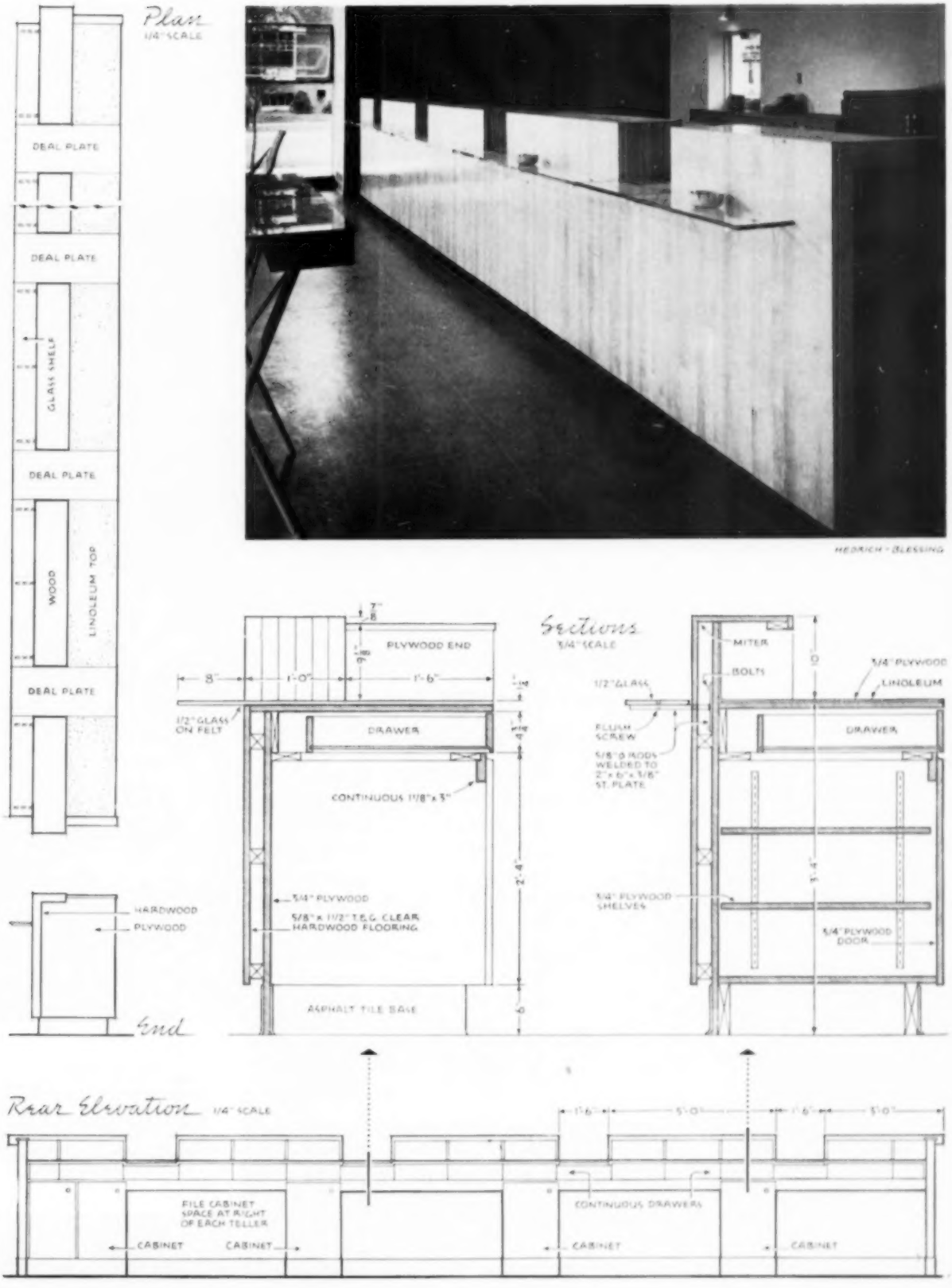

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Harry Weese, John Van der Meulen, and Bruce Adams, Architects

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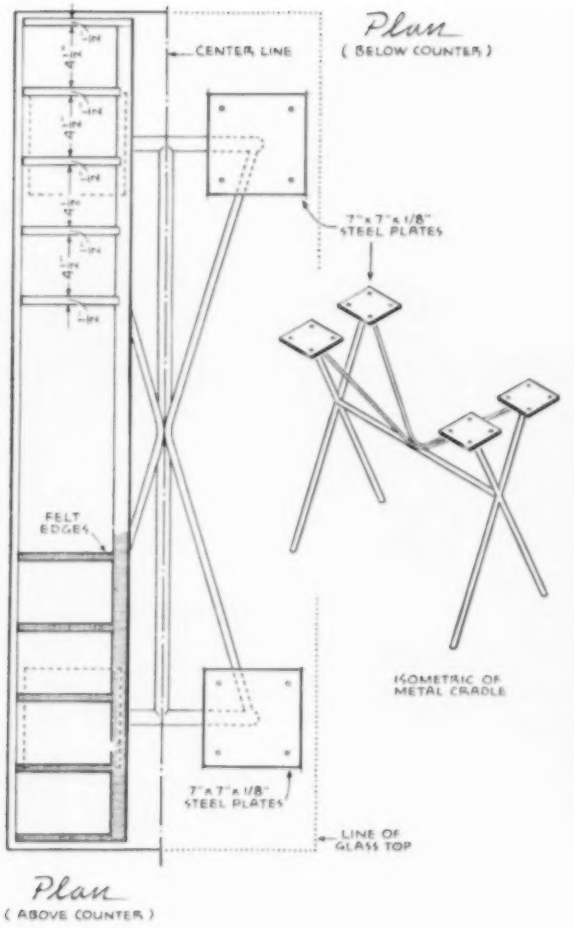
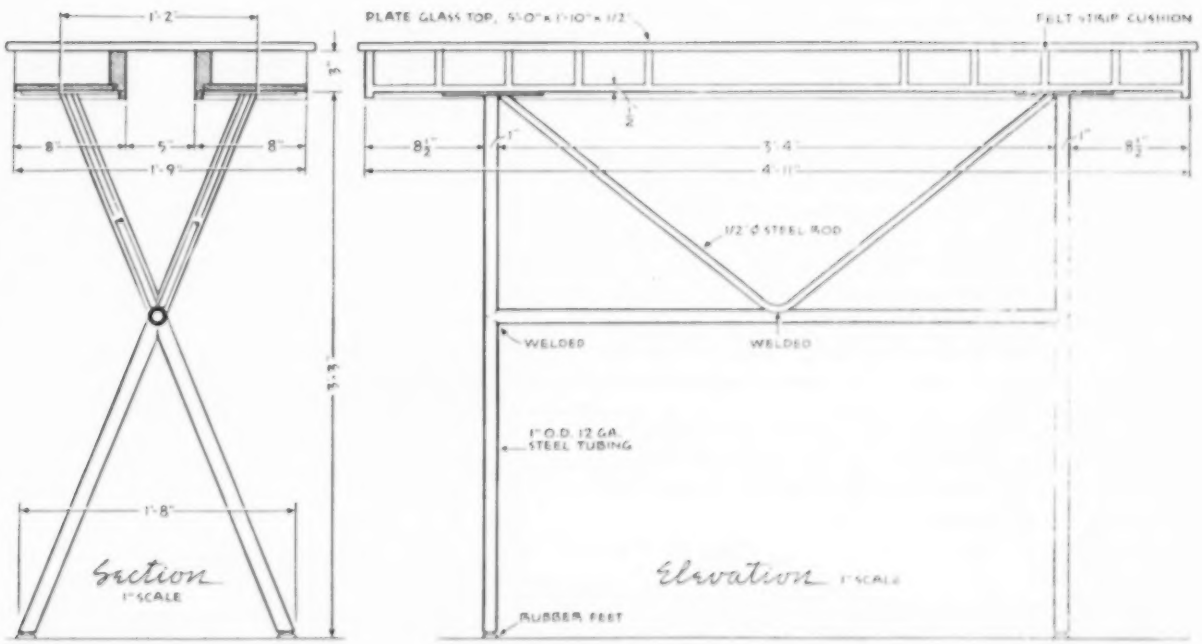


HEDRICH - BLESSING



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by Bernard Tomson

it's the law

This month we continue reporting the case summaries and other matters of interest supplemental to Tomson's *Architectural and Engineering Law* (Reinhold 1950), begun on this page in our last issue.

AGREEMENTS WITH OWNERS

The employment relation between architect or engineer and owner is entered into by a voluntary agreement between the parties; its creation and existence is governed by the general principles of contract law.

●

California. *Crane v. City of Ukiah et al.*, 110 Cal. App. 2nd 640, 243 P2nd. 582 (1952). The plaintiff general contractor agreed to construct a reservoir for the city within a fixed period of time and the individual defendant and the city entered into a contract whereby he was employed as consulting engineer to provide all necessary engineering services in connnection with the construction of the reservoir. The general contractor, subsequently in consideration for an extension of time permit, agreed that the city should have the right to charge him for all or any part of the engineering and other charges accruing during the period of extension. The Court held that the defendant engineer was not such a third party beneficiary so as to entitle him to enforce an agreement between the city and plaintiff. The plaintiff therefore was permitted to recover from the city the amount of engineering charges deducted from the sum due plaintiff under the contract.

●

New York. *Brown et al. v. Mount Vernon Housing*, 279 App. Div. 794, 109 N. Y. S. 2nd 392 (1952). The Appellate Division found that the housing authority could not be held liable for services rendered by the plaintiff where the resolutions of the authority specifically conditioned employment of architects upon approval of State Division of Housing, and such approval had not been obtained. Plaintiff architect agreed to submit to the defendant the preliminary plans for construction of dwelling units upon sites selected by the housing authority, and the services of plaintiff were accepted by defendant who refused to prepare formal contracts for submission to the State Division of Housing.

RELATIONSHIP TO OWNER

A trust relationship exists between owner and architect or engineer. In undertaking to render professional services, the architect or engineer represents that he has and will exercise reasonable care and skill without negligence.

South Carolina. *Hill v. Polar Pantries*, 219 S.C. 263, 64 S.E.2d. 885, 25 A.L.R.2d. 1080 (1951). In a suit for damages alleged to have been caused by a corporate defendant in furnishing unsuitable and defective plans and specifications for the installation of a frozen-food locker plant and in their failure to supervise properly the work, the court held that there was an implied warranty of the sufficiency of the plans and specifications for the contemplated purpose. The court reaffirmed the rule that where a person holds himself out as specially qualified to perform work of a particular character, there is an implied warranty that the work which he undertakes shall be of proper workmanship and reasonable fitness for its intended use.

●

Massachusetts. *Simpson Brox. Corp. v. Merrimac Chemical Co.*, 248 Mass. 346, 142 N.E. 922 (1924). The approval of plans by the owner for an underground concrete tank for the storage of fuel oil, did not, as a matter of law, mean an unqualified acceptance and sanction of the plan in all its details, nor was it held to excuse the contractor, who had drawn the plans, from the exercise of ordinary and reasonable care in designing the structure and formulating his plans.

LIABILITY FOR NEGLIGENCE OR FRAUD

An architect or engineer is liable to the owner for damages resulting from his negligence in performing architectural or engineering services. He is also liable for any fraud practiced on the owner.

California. *Raisch v. Sanitary Dist. No. 1 of Main County*, 240 P. 2nd 48 (1952). Plaintiffs brought an action to obtain an adjudication that an assessment of benefits for construction of a sewer system was invalid because of the interest of the engineer employed by the sanitary district in the contract and in the property within the district.

The Court, although finding that the engineer accepted employment to subdivide property of the property owners within the district while employed by the district, determined that his action did not invalidate the assessment of benefits in the absence of an allegation by the plaintiffs of any specific misconduct by the engineer or of any discrimination in making assessments.

It was further found that the engineer was not a public officer and that he had no interest in what happened other than in performance of his duties so that the assessments were not void on the ground of the engineer's interest in the contracts as a quasi public officer. Finally it was determined that the engineer was not a party to the contract even though he was required by statute to sign the contract between the district and the contractor.

●

Missouri. *Dysart-Cook Mule Co. v. Reed & Hechenlively*, 114 Mo. App. 296, 89 S. W. 591 (1905). Plaintiff employer was found to have been put to a greater expense in the construction of a mule barn than would have been necessary if the architect had drafted the plans according to agreed specifications. The plaintiff was entitled to recover of the defendants the amount of such expense.

●

Louisiana. *Barraque v. Neff*, 202 La. 360, 11 So.2d. 697 (1942). Defendant architect was held liable for defective work when he substituted stucco for brick veneer in constructing the plaintiff's house and which necessitated the plaintiff reconstructing the walls, which had in the meantime become defective due to cracks and leaks. Plaintiff was granted recovery for the cost of repainting due to cracks and leaks and for the brick veneering.

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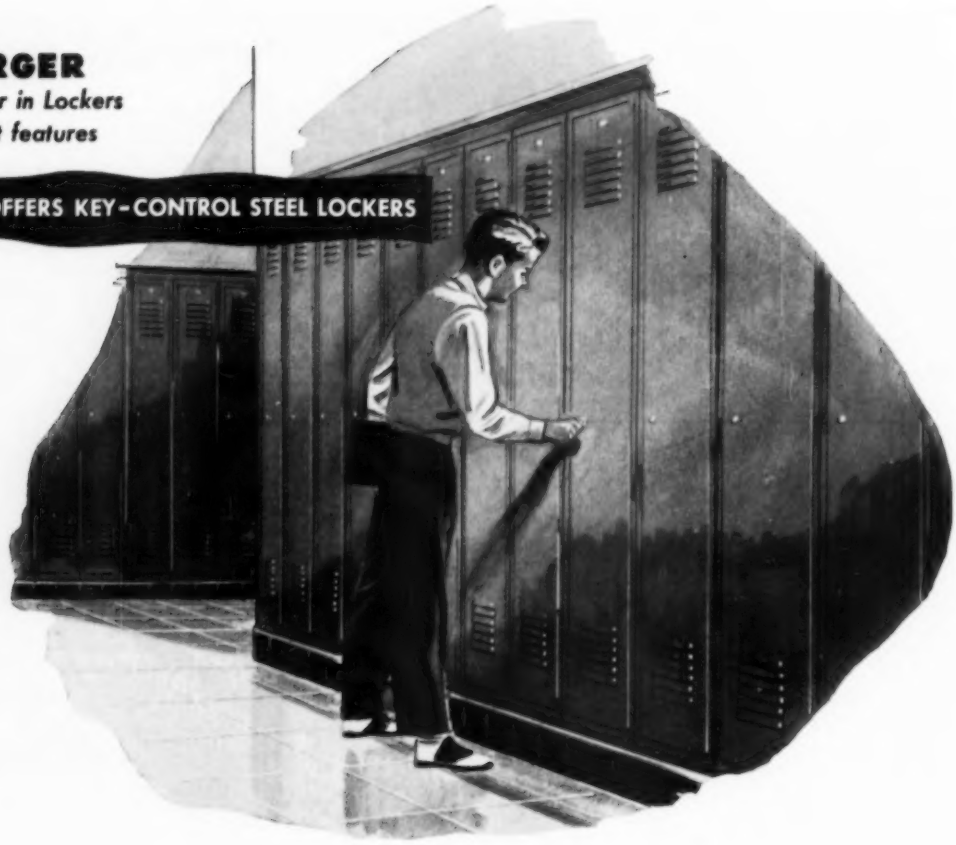

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by Carl Feiss

out of school

The little plane now flying over the gray western cliffs of the Mississippi and the low wooded hills of southern Missouri south of St. Louis, has gently detached me from the earth below. It is a soft, misty, early spring day with little white sheep clouds browsing on the tops of the trees in scattered flocks. For the past three and a half years I have been hedge-hopping from festering city slum to festering city slum all over the land. The country between the slums is so breath-takingly beautiful, the fertile valleys, the wide plains, and the hills and mountains, and there is so much of it all that I can't help wondering about people's bad habits. Being suspended like this, aloof aloft, I should be able to emulate Mr. Pickwick and cogitate on the "mutability of human affairs." There are no telephones.

This is my third June Commencement address to the graduating class of the School of Architecture at Theleme. It has been most gratifying to me to have been able to retain your friendship through these years and to have been allowed to continue to star gaze into the future of architectural education with you. But today I am going to talk about something else than education—at least what is commonly considered as education. This graduating class before me today faces problems and responsibilities out of school well beyond the considerations of the college classroom. I approach my subject with some trepidation, first because there are not now known answers to the questions which I must ask you, and secondly because, since you are at the end of your career of formal training, I may have difficulty in reaching you at all.

It may seem queer to ask questions of a graduating class. Your examinations of the past several weeks should have been questions enough. It may seem queer for me to ask questions when I neither expect nor really want your answers. The correct answers would be useless to me or to anyone else but you. And if they are questions which have never been asked of you before, it may take time, several years or even a lifetime, to answer them. But since I am not expecting any answers, what may appear to be immaterial or even impertinent at this time should be discounted if you agree that the questions must be asked.

A Commencement address is not necessarily a valedictory. A valedictory implies "Hail and farewell!"; we greet, praise, and forget. Actually it should be an introduction into the world of affairs, a bowing you out through the gates of Theleme into the traffic of the streets. You are to be deinstitutionalized. You will make your own bed, you will ascribe to each minute its dollar value, you will

(Continued on page 148)

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out of school

(Continued from page 147)

be responsible to an employer or to your employees, your family, and to your profession. Above all, you will be responsible to yourself. It is a queer feeling, this deinstitutionalizing. All kinds of little dependencies which have been automatic no longer exist. In this country most of us move from the institution and protection of our parents to the similar institution of the university. There may be an interlude of the institution of military service, but in any case we are rarely on our own until we graduate from college. Being on one's own entirely may not occur for some of you until not only graduation has taken place but also a complete severance from parental patronage, guidance, or assistance.

●

We are all dependent on certain hangovers from these institutions which have controlled us during our formative years. My first question of you then is this:

1. *Are you ready to be on your own?*

There is nothing wrong with admitting you're not. Only you can judge whether you are prepared to move on your own or whether you may need the further protection of an institution—probably an office within which you will feel your way under guidance. Most of us professionals move slowly out of the institution—some of us never. The matter also is not always one of personal choice. However, a word of warning or possibly what I am thinking about is not so much a warning as a reminder that you need to ask yourself this second question:

2. *Am I a person in my own right?*

This, by graduation, you should know. But if you are not, you had better face up to the fact. You will have to make the choice of institutionalizing yourself with not only protection in mind but also with the consideration that for a period—possibly your whole life—your will and your ego will be subservient to a name and a personality of greater strength than your own. To have been a pupil of Michelangelo would have been an honor and a worthwhile attribute. To have been an imitator of the master means nothing. To be a Michelangelo is a worthwhile ambition and one possibly obtainable in any age. It happened once or twice and could again.

Many of you now graduating will have been in the situation where your institution has been led by a strong and outstanding personality—probably in design. You may have gone to your particular alma mater because you wished to study under this maestro-leader. You did so happily and are satisfied with your contact and experience. From one to five years you have basked pleasantly under his smile, paled under his frown, and strongly fought his cause in the bull sessions where the affairs of the world are settled. This is as it should be. We all of us learn best from those we admire the most. And even if your contacts were

(Continued on page 150)

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out of school

(Continued from page 148)

second hand, if you had to rely only on the published word, the published photo, and the breathless glimpse on a rare visit to a completed masterpiece by the maestro-leader, you have completed your novitiate within his influence and under his spell.

Many people are bothered by the limited and limiting influence of any one strong personality on architectural students. There is cause for alarm only if two situations exist. First if the maestro-leader is so egocentric that he permits study of only his ideas and his works. The other is if after working under the influence of a maestro-leader, the former student can never cast off the spell, if he is throughout his life not a person in his own right.

Perhaps to you at this moment it is more important to carry the torch which the maestro-leader has handed you. Remember that in the great relay race which is human education, the torch which each of us must carry is the summation of all the knowledge we are capable of grasping and handing on. The fact remains that all of us are educators of sorts, whether in school or out. We may believe in only one form of architectural expression but it would be better if we understood a dozen. Our practice as comprehensive architects will require that we design live buildings of our own. No man can transmit by education or any other means, his own genius. Genius cannot be inherited nor can it be imitated. Therefore find your own, and remember that if your maestro-leader did not try to help you find it, he was a poor teacher—great creator and egocentric though he may have been. Whoever taught you, good or bad, if you still have to find your genius and your own ego, you need to ask of yourself the next question:

3. *Am I interested in continuing to learn—out of school?*

When you close the great gates of Theleme behind you, are you going to shut out all learning? At this moment, facing the reality of sinking or swimming with the business world and the profession of architecture, you are saying to yourselves that you are done with school, you are out to make money, you want the security of a good job, you want a home and family, you want fame and fortune. You want to leave enduring monuments to yourselves. All of these things are good. May you achieve your desires! But the fact remains that time off for learning should be in your ambitions—whether it be a few minutes a day or longer. There is no pausing after you leave Theleme. You have learned one thing, I hope, and that is how to study. Studying in the days to come will be in real earnest, I assure you.

●

I have some difficulty in phrasing the next question. It is the kind of question I mentioned at the beginning as being on

(Continued on page 153)

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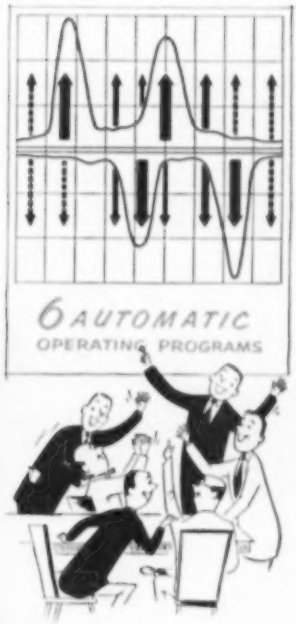

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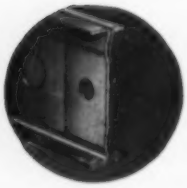

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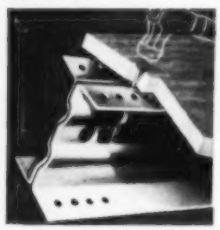

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NEBRASKA: Lincoln Steel Works, Lincoln.

NEW YORK: Casazza Steel Buildings, Inc., Albany; Steel Frame Building Co., Buffalo; Syracuse Steel Buildings Corp., Syracuse.

NORTH CAROLINA: Carolina Steel & Iron Co., Greensboro; Shull Building Products Co., Charlotte.

OHIO: Argus Industries, Cincinnati; Artcraft Ornamental Iron Co., Columbus; Framing Systems, Inc., Cleveland.

PENNSYLVANIA: Alton, Inc., McKeesport; Conyngham Sales Company, Hazelton; Philadelphia Welding & Framing Co., West Conshohocken.

SOUTH CAROLINA: Todd Engineering & Supply Co., N. W., Charleston.

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UTAH: U. S. Rock Wool Co., Salt Lake City.

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WASHINGTON: Dix Steel Building Co., Spokane; Lockenby Structural Steel Co., Seattle.

WISCONSIN: Arnold Equipment Corporation, Milwaukee.

out of school

(Continued from page 150)

the impertinent side. The best that can be said for it is that it is personal:

4. *What are you afraid of? Why this passionate quest for security?*

Repeat this question to yourself and then tell yourself that you are not afraid —not afraid to pioneer, to face public opinion, to fight for a belief if you have one. This is no world now for those who seek security as the only objective of an ambition. It is true that great architecture has derived from a search for security—the Pyramids, the temples, and the cathedrals of the world are all the results of the search for spiritual security, just as Carcassonne or Machu Picchu are the results of striving for bodily security. But the kind of security which drives us mentally underground is the security of petty fear and petty ambition which builds nothing worthwhile. I am worried because so many of you will be looking for and hoping to achieve job security at once. In this you will be disappointed, even though employment may come easily today. I am not being pessimistic, but you must realize that ours is a pattern of occupational mobility, that we do not stay long in one place in our early work years, that the days of the long apprenticeships are over for good or bad, and that you can look forward to experience by mobility. This type of experience has many disadvantages, the greatest being the difficulty of identifying yourself with a responsibility — with seeing things through to a conclusion which is your own. It means all too often a chance to escape the results of mistakes, even the knowledge that they have been made, and the maturity that comes with such knowledge.

If you feel that you must have security of job at once, then try for something else than architecture or planning. If you want adventure and like to gamble —well, you're on your own. And it can be fun.

5. *Are you really open-minded about architecture?*

That's a silly question and probably means something different to each of us.

(Continued on page 154)

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out of school

(Continued from page 153)

Besides wouldn't it be easier all around if we made up our minds, decided we knew all the answers, and didn't bother with looking around for more complicated solutions to simple problems? Of course no one yet has solved all of the most common of many of our simple problems. It is just about as hard for a housewife to make a bed today as it was fifty years ago. As we invent new gadgets—vacuum cleaners and washing machines and dishwashers and all the rest—we have to invent new industries and new technicians and new places for the gadgets and a whole new series of interlocking things to go wrong with which to harass the housewife all over again. Wringing out the old floor mop was a hard job in the old days, but it could be done by one person. What housewife today can repair her own electric floor waxer? I want you young graduates with fertile imaginations to recognize that being open-minded about architecture may mean occasional checks back to the sterling worth of the old floor mop just in case your new architecture blows a fuse.

Being open-minded about architecture is going to mean something else to you one of these days. It is going to mean your moving into civil works of all kinds. You will need to recheck your relationships to the engineer, the artist, the labor leader, the contractor, the builder, the city planner, the building official — a whole host of design elements, people, and ideas. Your schooling at Theleme could not even approximate in your five years of training the many facets of your future work and the influences which will be brought to bear on you as an architect.

And speaking of influences to be brought to bear on you, I will put the final question for you to ask yourself, not only just now but from now on until the end of your time:

6. *Do I really believe in what I am doing?*

Honestly, gentlemen and ladies here graduating, if you don't believe in what

(Continued on page 156)

modern design and Canvas

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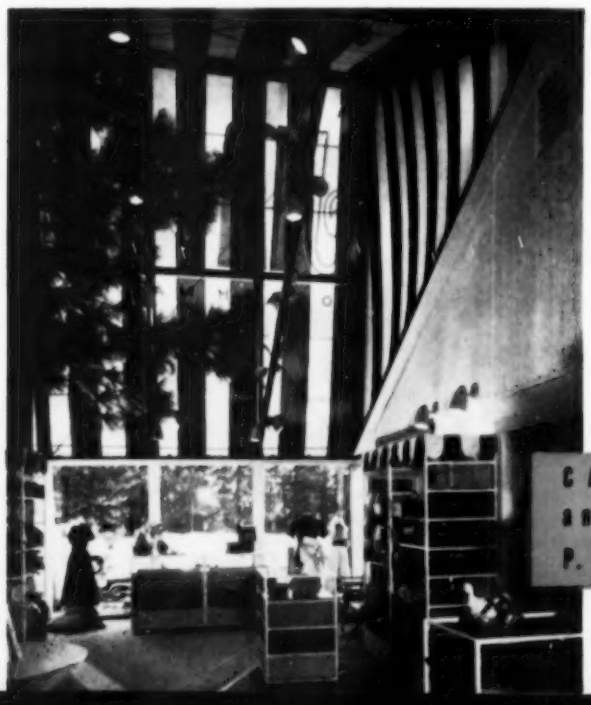
Walter Landor

Walter Landor & Associates
Industrial Design



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out of school

(Continued from page 154)

you are doing in architecture, in your hearts, stop now. Life is much too short and no man should be dishonest with himself or his associates. To practice comprehensive architecture, to build new cities out of old and new cities on new land, to create with the great tools at hand a new and better home for the peoples of the world is a job too big and too important to be taken on by those of us who can do better in other fields. Remember this, that there is a bad background of waste—nearly a hundred years of bad building to make up for.

●

I mentioned slums in the first paragraph. I've been avoiding talking shop for the past three years, but I must say to the Class of 1953, gentlemen, don't build more slums. We have too much repair work to do before we reach a least common denominator of human decency throughout the world. My lifetime will not see the slums of Chicago, Cairo, or Calcutta eliminated, and all of the new achitecture you will be creating will be window dressing to the shambles behind unless you are willing to balance one effort with the other. I cannot believe that in this day and age you can believe in the validity of what you are doing if you ignore the broad responsibilities that the cultivated man must assume during the days of your own future.

●

You have been privileged to receive an architectural education. May it not only mean something to you but to the people for whom you build—not just today's client but all those unknown, who will use the building for its lifetime! May you work in our cities for their successful rebuilding into worthwhile places in which to live and work. And I am sure that if you really believe in the work you are doing, the world which badly needs the skills, the talents, and the planning of the architect will be bettered by your efforts. Good luck and peace be with you and all of us so that we may accomplish our objectives!

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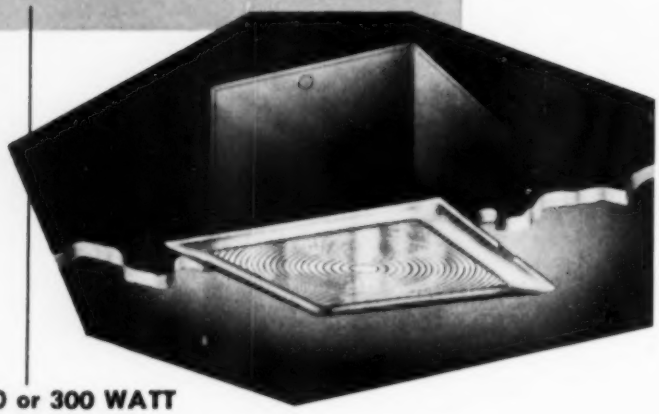

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contractors named

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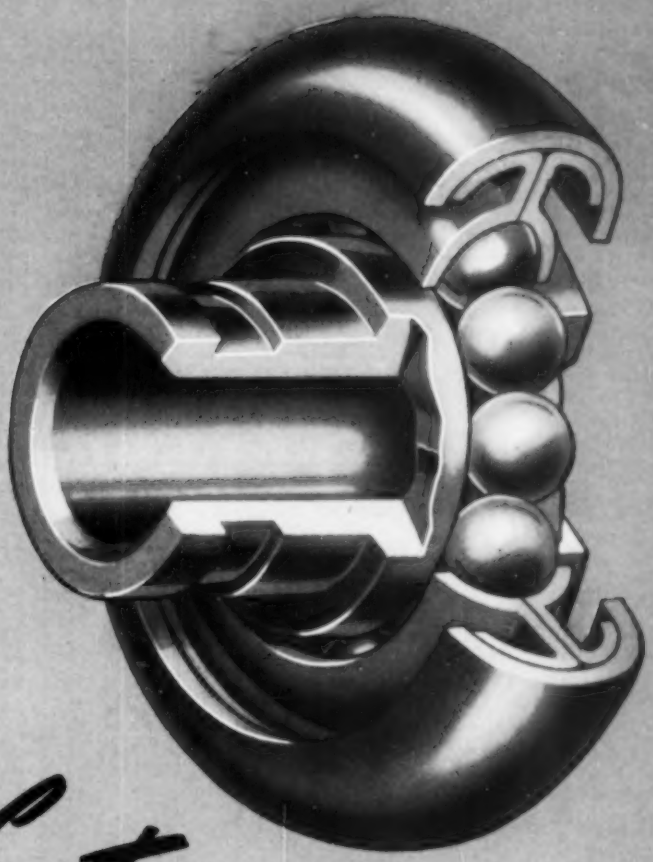

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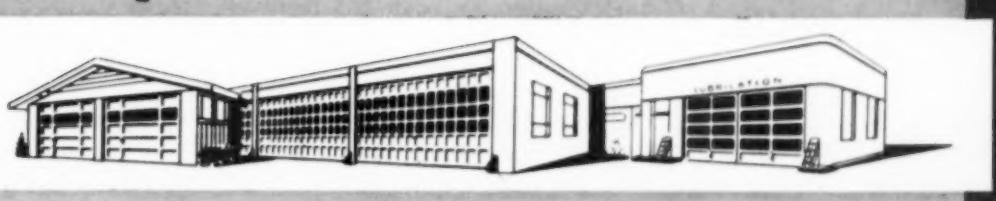

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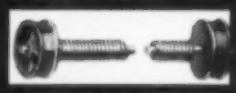

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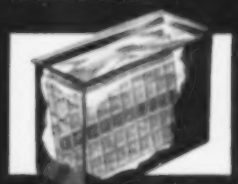

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books received

The New Art Education. Ralph M. Pearson. Harper & Brothers, 49 E. 33 St., New York 16, N.Y., 1953. 272 pp., illus., $5.

The Origin and Development of Early Christian Church Architecture. J. G. Davies. The Philosophical Library Inc., 15 E. 40th St., New York 16, N. Y., 1953. 152 pp., illus., $4.75

Neighbor Flap Foot. The City Planning Frog. Bill Ewald, Jr., and Merle Henrickson. Henry Schuman, Inc., 20 E. 70 St., New York 21, N. Y., 1952. 56 pp., illus., $2.50

Statically Indeterminate Structures: Their Analysis and Design. Paul Andersen. The Ronald Press Co., 15 E. 26 St., New York 10, N.Y., 1953. 318 pp., illus., $7.50

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by LEWIS MUMFORD

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architectural euphoria

The Age of Wren. *Ralph Dutton, B. T. Batsford Ltd., The British Book Center, Inc., 122 East 55th St., New York, N. Y., 1952. 136 pp., illus. $9.00*

Considering all that has been written in thirty years about Wren, from the *Memoirs of Sir Christopher Wren*, by James Elmes (1923) through the exhaustive twenty volumes put out by the Wren Society, to say nothing of many other individual works, one might think there was nothing more to be said about the great English architect, his works, and his influence. Yet Ralph Dutton has produced a meritorious and strikingly attractive book that will be widely acclaimed and shed new light on one of the most glorious periods of architecture and its practitioners.

Dutton's book follows closely another account about the master published in 1952. *Wren: His Work and Times*, by John Lindsey (reviewed in April 1952 P/A). Alike in subject, the two books are dissimilar in approach and content. Lindsey is a novelist, not an architect, so his treatment is more or less from an emotional and slightly sentimental angle, dealing with Wren's personality and the author's own love of Wren's buildings. Dutton, on the other hand, with his usual sense of scholarship and his cultivated taste, approaches the subject quite differently—viewing the age as a whole. In his well-planned introduction, in which he setts the architectural scene, he writes: "To many the architecture of the half-century following the Restoration must seem the most sympathetic which has ever been produced in this country. The robustness and individuality of the vernacular style were still alive, but were being moulded by the spread of the Renaissance on to orderly classical lines." None will disagree that the architectural era which had Wren as its head was in fact the richest and most vital that England had ever known. The whole of the period embraced in this book is dominated by the figure of Wren. Naturally, the greater part of the time he was boldly in the forefront as the

(Continued on page 160)

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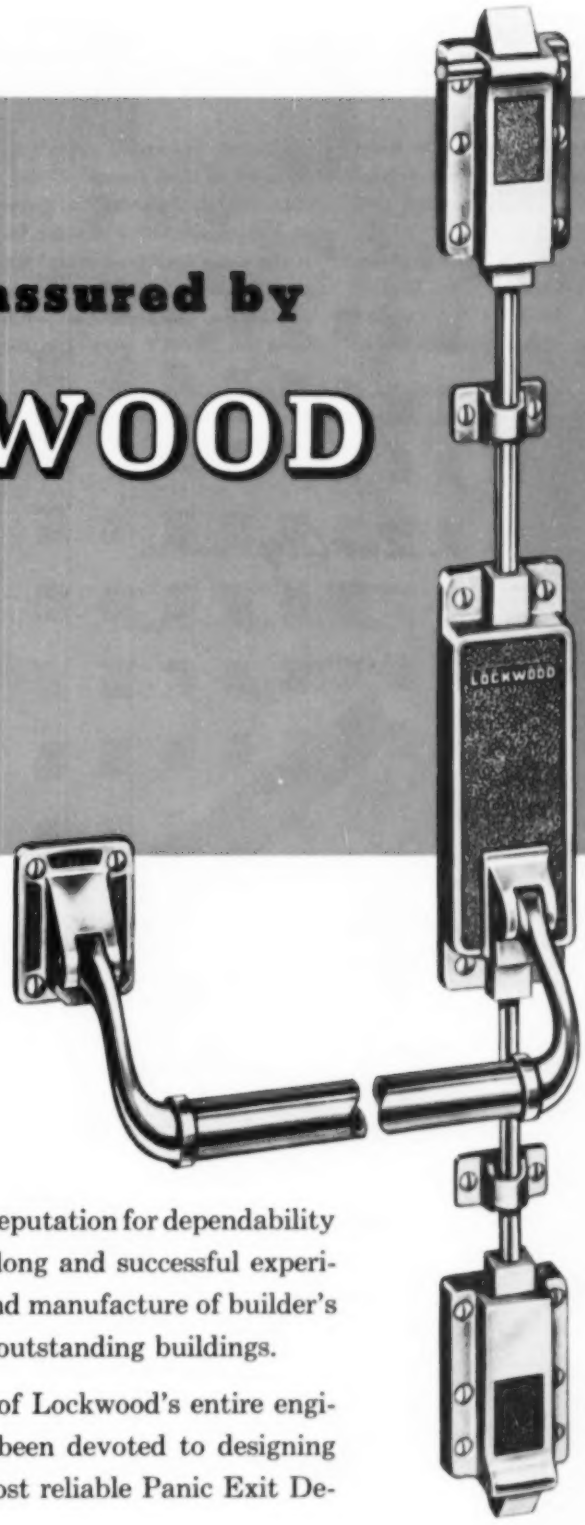

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see our CATALOG in SWEET'S FILE ARCHITECTURAL

reviews

(Continued from page 158)

leader in the profession, but in the latter decades his influence spread far beyond the span of his life, well into the 18th Century.

In a most enlightening and thoughtful chapter which he labels, "The Miracle Youth," Dutton describes Wren's precocity as a young man, the author traces his career, his varied activity and productivity of that formative period. The years directly following the London Fire were especially active ones for Wren, but at the same time frustrating. His prodigious schemes for the reconstruction of the City—a vast amount of industry and labor on Wren's part—progressed no further than the paper on his drawing board. It was not until March, 1669, when Wren was appointed by the King as Surveyor-General, that he attained the generally accepted position as the first architect of the country. The appointment marked the opening of a new phase of Wren's long and successful career which Dutton treats upon in complete detail.

One of the book's most rewarding chapters is on St. Paul's Cathedral and the City Churches. Dutton recounts the conception and the building of the great cathedral in all its ramifications, in an engaging and somewhat romantic manner. As any architect of so great a project would, Wren had his difficulties and problems with the personalities involved, but at least he had the satisfaction—within the comparatively short span of 35 years—of seeing his design for the London landmark completed, from the foundations to the gilded cross towering 380 feet above the churchyard on the Cathedral grounds. While St. Paul's quite obviously occupied most of Wren's time and attention, it is interesting to note—as the author points out—the energy he expended on the designs and rebuilding of other City churches. Of 80, which were destroyed by the Fire, Wren undertook to rebuild 51, most of them before the end of the 17th Century. It is a sad commentary that so few of them, due to the march of commerce, convenience, the Blitz, and other disasters, survive in present-day London.

Since he has undertaken to view the age of Wren as a whole, Dutton admirably describes the work and achievements of the great master's contemporaries and followers—Talman, Hooker, May, Jarman, James and Wynne, among a few of them—and of the Baroque School which ended the amazing architectural era. He writes of them as "The Lesser Company," but considering the age as a whole, while they were over-shadowed by Wren, certainly their accomplishments were none the less noteworthy. As extraordinary craftsmanship in the arts was especially prolific during that time, the author treats knowingly on the work of such figures as Grinling Gibbons, Thornhill, Tijou, C. C. Gibber, Daniel Marot and several other carvers, painters, and designers that graced the period.

(Continued on page 162)

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reviews

(Continued from page 160)

It is a merit of this book that it is profuse with admirable illustrations and among the 150 or more are representative examples of the work of these artists. Virtually all of the great masterpieces of the age are shown, some in detailed interior views as well as the exteriors, while many of the fine, but less well-known contemporary provincial architectural achievements, such as the Guildhall at Wocester and St. Mary's, Warwick, are included. Thus the "Age," not only in text but in illustration, is here more thoughtfully and completely—to say nothing of attractively—depicted than has ever before been attempted in a single book. FRANK A. WRENSCH

rational search reviewed

Form. A Balance Sheet of Mid-Twentieth Century Trends in Design. *Max Bill. Karl Werner A. G., Basel, Switzerland, (Available: Wittenborn & Company, 38 E. 57 St., New York 22, N. Y.) 1952. 168 pp., illus., $10*

The subject matter of this picture book is new, including recent designs for sewing machines, children's toys, and housing projects; but it has a nostalgic resemblance to the crusading publications of the earlier days of the modern-art movement. Here again the impact of new art forms on industrial design is shown; and most exacting criteria for the suitability of forms to their function have resulted in useful objects which are uniform in their austere elegance.

Max Bill's commentary (in English, French, and German) and the crisp clear photographs which he has chosen, provide a well-timed reminder that Modern Design implies a rational search for significant form. HEATH LICKLIDER

Useful reference

The Architectural Index for 1952. *Compiled and Edited by Ervin J. Bell. The Architectural Index, 5532 S. Kenwood Ave., Chicago 37, Ill., 1953. 33 pp., $3.*

This index of all material appearing in the architectural press is becoming increasingly useful. For the busy architec-

(Continued on page 164)

Trowbridge & Livingston, Architects

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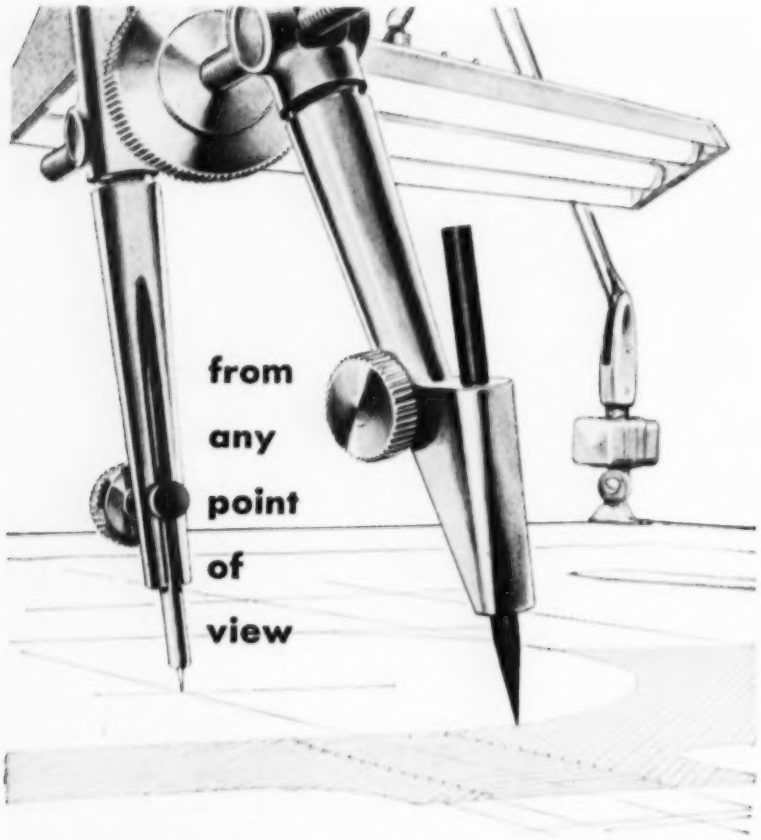

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reviews

(Continued from page 162)

tural office that remembers "an article on hotels that was in one of the architectural magazines about the middle of the year," or the research-minded practitioner who wants to check everything that has been published on a given subject, the work is invaluable. Magazines indexed are: *Arts & Architecture, Architectural Forum, Architectural Record, House and Home, Progressive Architecture,* and articles from *Interiors.* Contents of these publications are indexed by general subject matter (accounting, acoustics, etc.), by location (State or foreign country), by architects, and by building types. Many of the service requests that come into the magazine offices could be answered more quickly and just as accurately by the inquirers themselves, if they had copies of the *Index* available. T.H.C.

speculations with amenities

London Homes. *Ralph Dutton. The Londoner's Library series. Allan Wingate, 12 Beauchamp Pl., S. W. 3, London, England. (Available: British Book Center, Inc., 122 E. 55 St., New York 22, N. Y.) 1953. 132 pp., illus., index, $3.25*

The development of London private houses, which were the prototypes of so many urban dwellings in older American cities, and particularly the elegant individual town houses which were the envy of visitors from Continental cities, is traced in this informal, often chatty, architectural history of the type, from the building boom after the Great Fire, 1666, to our own day. Inevitably, Dutton discusses the origins of the famed London squares and the urbane terraces and crescents of the 18th Century, which were generally the speculative enterprises of noblemen ruthlessly demolishing their own palatial city homes and gardens to profit by the tide of residential expansion steadily encroaching westward on once fashionable suburbs.

For the student of memoirs and diaries of the Stuart, Hanoverian, and Victorian ages, it is particularly rewarding to discover compact accounts of such frequently mentioned scenes as long-

(Continued on page 166)

When's an "extra" room not an extra room?

Answer: when it's part of your living room. For instance, when you fold the large "Modernfold" door back against the wall to add length to your living room . . . your "extra" room disappears. Yet when you close this *movable wall*, you've built a den, study, TV room or bedroom.

Notice how Bill W. Tietz, President of Tietz Construction Co., Tacoma, Wash., uses "Modernfold" doors to full advantage in his Mountbrook Manor development. His customers like—and buy—the idea of being able to shape their houses to their needs of the moment . . . through the magic of "Modernfold" doors.

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For every room division or door closure problem, there's a simple, economical, space-saving solution. That's "Modernfold," the original folding door.

Specifying "Modernfold" doors keeps clients happy. For these steel-framed, vinyl-covered doors can't be equaled *anywhere* for quality of design . . . for quality and strength of materials.

And because this line is *complete*, you're sure to save time and get exactly what you want when you specify better looking, easier operating, longer lasting "Modernfold" doors.

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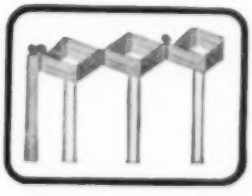
Fabric covering conceals all operating mechanism. No cornice needed. Adjustable trolleys keep doors hanging flush to jamb.



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Balanced hinge construction both top and bottom. Trolleys attached at hinge intersections. No sidewise twist or pull possible.

Better Background
Over 100,000 "Modernfold" doors now in operation—a backlog of space engineering experience that's your guarantee of satisfaction.

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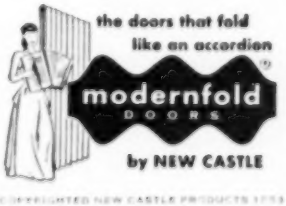

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When your plans call for doors that will withstand hard usage and severe abuse — you'll surely want to specify HARDWOOD *solid core* Doors. With them you get so many features not found in ordinary doors of lighter core construction — and, they're yours for so very *little* additional cost. HARDWOOD solid core construction gives you sturdier, longer-life doors that will withstand hard bumps and kicks without veneer "hole-thru" that results in costly replacements: it provides better room acoustics with more doorway sound resistance — and, assures additional safety by as much as half an hour in event of flash fires. *Time Proven* HARDWOOD Doors are made in three distinct types of core construction and faced with thin, medium or thick veneers to meet every job requirement. Consult ARCHITECTURAL FILE 16c HA or write for complete details.

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reviews

(Continued from page 144)

vanished Montagu House, Clarendon House, Bedford House, and other mansions that replaced the pretty villages encircling London at the time of the Restoration. Tribute is paid to the planning skill of men who designed houses to suit the life of the times—and their efforts to create harmonious neighborhoods by regulation of building heights and scale of the façades. C. M.

wet-heating problems

Dunham Product Application Manual: A Handbook on Heating. *C. A. Dunham Company, 400 W. Madison St., Chicago 6, Ill., 1953. 400 pp., illus., $2.50*

A revised edition of a desk-reference handbook on heating, published in connection with the 50th anniversary of the C. A. Dunham Company, is designed for use by architects and heating engineers in solving wet-heating-system problems. Discussed and illustrated in detail are the selection, application, and installation features of radiation, vacuum and condensate pumps, unit heaters, steam heating specialties, and complete heating systems. The Dunham Pocket Manual ($1.00) is published as a companion version and is adapted from the Handbook with emphasis on application and installation information for contractors and maintenance men. B.L.

aid for engineers

Tables and Formulas for Fixed-End Moments of Members of Constant Moment of Inertia. *Paul Rogers. Frederick Ungar Publishing Co., 105 E. 24 St., New York 10, N. Y., 1953. 95 pp., illus., $3.75*

The difficulty with which fundamental fixed-end moments are obtained, for all but the simplest loadings, is a principal deterrent to wider use of the method of Moment Distribution. For a more nearly exact analysis of continuous beams and rigid frames, the method is more readily applicable through reference to these tables of fixed-end-moment coefficients.

(Continued on page 168)

Why GAMBLE with SAFETY in Showers?

...Install **POWERS** Thermostatic **WATER MIXERS**

For the Most **Comfortable** and **Safest** Showers

64 Modern Showers at SHAWNEE-MISSION HIGH SCHOOL, Kansas City Are Regulated by POWERS Thermostatic Mixers

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Associates: **PERKINS & WILL**
Consulting Engineer: **W. L. CASSELL**
Contractor: **W. T. CONROY**

Why POWERS Thermostatic Water Mixers?

They're safer! They cost more, they're worth more! They're doubly safe against **temperature** as well as **pressure** fluctuations. They protect bathers against scalding caused by dead ends in hot water lines.

Temperature changes in water supply lines are more frequent now because of greater use of instantaneous, submerged and indirect type water heaters. Only a thermostatic mixer safeguards bathers from shots of hot or cold water caused by fluctuating water temperature.

When only one shower accident can cost so much in damaging publicity, personal injuries and time consuming law suits, why not install Powers . . . a really safe, non-scald water mixer?

SIMPLE DURABLE CONSTRUCTION
Insures long life and minimum of maintenance.

ONE MOVING PART
Easily Accessible from the Front. Easy removal of Thermostatic Motor and Valve Assembly with only a screwdriver makes it possible to inspect, clean or flush out mixer if necessary.

To Be Sure of Comfortable Carefree Showers Install POWERS Mixers

(h8)

Established in 1891 • **THE POWERS REGULATOR COMPANY** • SKOKIE, ILL. • Offices in Over 50 Cities

...Then **ALGRIP** Banished Slipping Accidents and Pared the Company's High Insurance Rates!

ELIMINATED: Crippling accidents that slashed production.

SAVED: Lost man-hours and high insurance premiums.

Take a machine tool, surround it with oil-filmed flooring, and you've set the stage for a tragedy. This one—in a southern industrial plant—cost a skilled workman his arm.

Then we installed A.W. ALGRIP Abrasive Rolled Steel Floor Plate. Result: No more slipping accidents! For tough abrasive "grinding-wheel" grain, rolled deeply and densely into steel plate, makes ALGRIP truly non-skid. It's almost impossible to slip on this hard-gripping floor plate—even when it's wet or oily—even on steep inclines!

Benefit: *A three-way saving . . . (1) No more costly, crippling accidents. (2) More efficient work and better production. (3) A substantial reduction of workmen's compensation insurance premiums—substantial enough, in fact, to pay for the cost of the ALGRIP installation!*

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A.W. ALGRIP—only abrasive rolled steel floor plate in the world—pays for itself in savings from safety. Get the full ALGRIP story today; write for our new Booklet AL-28—without obligation.

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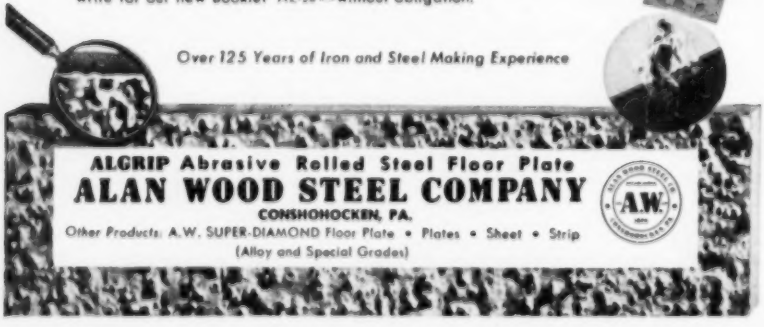

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ALAN WOOD STEEL COMPANY

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Other Products: A.W. SUPER-DIAMOND Floor Plate • Plates • Sheet • Strip (Alloy and Special Grades)

reviews

(Continued from page 166)

For each of the 66 different types of loading there are given: (a) the appropriate formula; (b) a table of coefficients for F.E.M. at either end of the Leam; and (c) a graph of the function. The coefficients in the table and graph are given as a function of the location along the span in the case of concentrated loads, or, as a function of the loaded length to total length ratio in the case of uniformly varying loads. The table for each type of loading is sufficiently detailed so that usually it is not necessary to resort to the graph for interpolation, but the latter is very useful in enabling the user to visualize the variation represented in the table.

The book is well arranged for quick and easy reference; the type is large and well spaced. The index is unique in that each type of loading is represented pictorially and the page on which the desired table appears can be picked out immediately. For those engineers who employ Moment Distribution regularly, the book will be an indispensable aid. For others it should, at least, be available for reference.

DONALD G. RADWAY

industrial pioneer

Father of Air Conditioning. *Margaret Ingels. Country Life Press, Garden City, L. I., N. Y., 1952. 170 pp., illus., $2.50*

Written by a close working associate of Willis H. Carrier, founder of Carrier Corporation, this biography describes, in addition to the life of the late Dr. Carrier, the development of the company which he founded and the air-conditioning industry as a whole. The biography is based on extensive research and documentation as well as information obtained in interviews with Dr. Carrier before his death. Included also is a chronological table of events (1500-1952) which led to modern air conditioning, listing milestones in the development of air-conditioning equipment and also related developments and theories. A detailed bibliography for the chart follows it and the last section of the book is devoted to a listing of books and published articles by Dr. Carrier. B.L.

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p/a views

(Continued from page 12)

Dear Editor: I fully agree with what you have to say in the open letter to Miss Gordon: it gives careful weight to her arguments, but points out the greater dangers which will result from her attack.

I am sure that with her intelligence she will recognize that this country will advance into a higher civilization only through experimentation and variety of approach. What is best will survive the conflict, which is all in accordance with the law of nature.

PIETRO BELLUSCHI, Dean
School of Architecture & Planning
Massachusetts Institute of Technology
Cambridge, Mass.

•

The next two letters are copies:

Dear Miss Gordon: I cannot share your enthusiasm for Yeon's house nor do I approve of your attitude toward the architecture of today. The house you laud is to my mind psuedo-progressive and too repetitive. Though it does embrace modular design which has been practiced by many leading modern architects before Yeon, it does so as an applique to vitiated classic form. The plan is weak and broken up; the interiors furnished inconsistently (however expensively) with a taste which I would hesitate to call good.

Too, your attack on the leaders of the modern movement is unworthy of a magazine that has in the past made contributions to contemporary architecture and certainly your article by Langewiesche is within this tradition. You are perfectly right in criticizing a few details, such as the unshaded glass walls. It is patent however, that these leaders have progressed in usages of new materials and techniques and have developed worthy new forms. There is no question but that your magazine has published many houses influenced by the modern architects you now condemn.

Your denunciation of the open plan and large glass areas seems to be misunderstood, for, rather than clutter, a clean

(Continued on page 178)

COORDINATED LIGHTING
BY GRUBER . . .

the new approach to improved interior design

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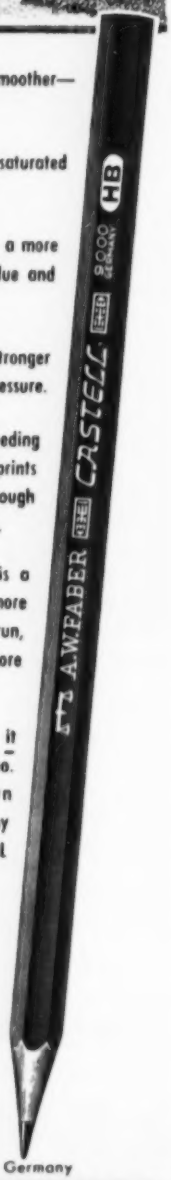

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the drawing pencil with the Master Degrees

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A.W. FABER-CASTELL
PENCIL COMPANY, INC., NEWARK 4, N. J.

p/a views

(Continued from page 170)

design effect may be more readily appreciated. Barrenness is your word for the latter. Have you considered the simple Japanese houses barren, devoid of esthetic too?

You criticize the glass house, New Canaan, I presume, for its lack of function. This building is an esthetic achievement and at the same time it does solve most of the functional requirements of its owner. It would have been designed differently for others with children and house pets. The kitchen would have been larger then, too.

However, most disturbing is the way in which you criticize. Isn't it unfair criticism to attribute functional failures to a *style* of architecture? Why bring in the often repeated remarks about the leak in the roof? All kinds of roofs leak. You say modern houses don't function well. Other styles too have failed in similar respects. The faults are emphasized, the virtues minimized. Also disturbing within the general attitude of your article is the bringing in of ideas that are not germaine to the criticism of architecture. You even note that a modern foreign architect was a Communist, at a time when people are rightly fearful of Communism. Actually, I believe, you will find contemporary architecture behind the Iron Curtain more like Yeon's than like that of the leading modernists.

I am therefore greatly disappointed in your new editorial statements. Of course there are unsolved problems in new architectures. That is why "styles" change and develop. Some reaction or hesitation for the taking of inventory is desirable as a constructive measure. Your article may help fill this need.

OLINDO GROSSI, Chairman
Department of Architecture
Pratt Institute,
Brooklyn, N. Y.

•

Dear Miss Gordon: In our hall, heading your article is a description which the students have attached. It is short. I quote: "McCarthyism invades Architecture." I agree with this and would add

(Continued on page 175)

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BUILDERS HARDWARE

Contemporary
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Pull units shown are 2 of many Cipco Units . . . suitable for glass, metal or wood doors.

Your Architectural Hardware Consultant will be happy to plan with you.

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Matching the modern home in superlative beauty, Vina-Lux gets admiring looks wherever it is used. It is without a peer for living rooms or dens... for kitchens, dining rooms or any food serving area. For, wherever food is served, Vina-Lux serves best. Grease, oils, acids or alkalis won't harm it ... spilled foods won't spoil it ... dirt and grime won't wear in. Its glossy, satin-smooth surface stays beautiful even under the hardest traffic ... after long years of use.

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And, Vina-Lux brings the ultimate in brilliant new color ... colors so light and bright they fit to perfection today's decorative requirements. For floors that look beautiful ... *stay* beautiful, Vina-Lux will give more wear with less care than any other flooring.

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SPECIFIED: Maximum utility, economy and beauty

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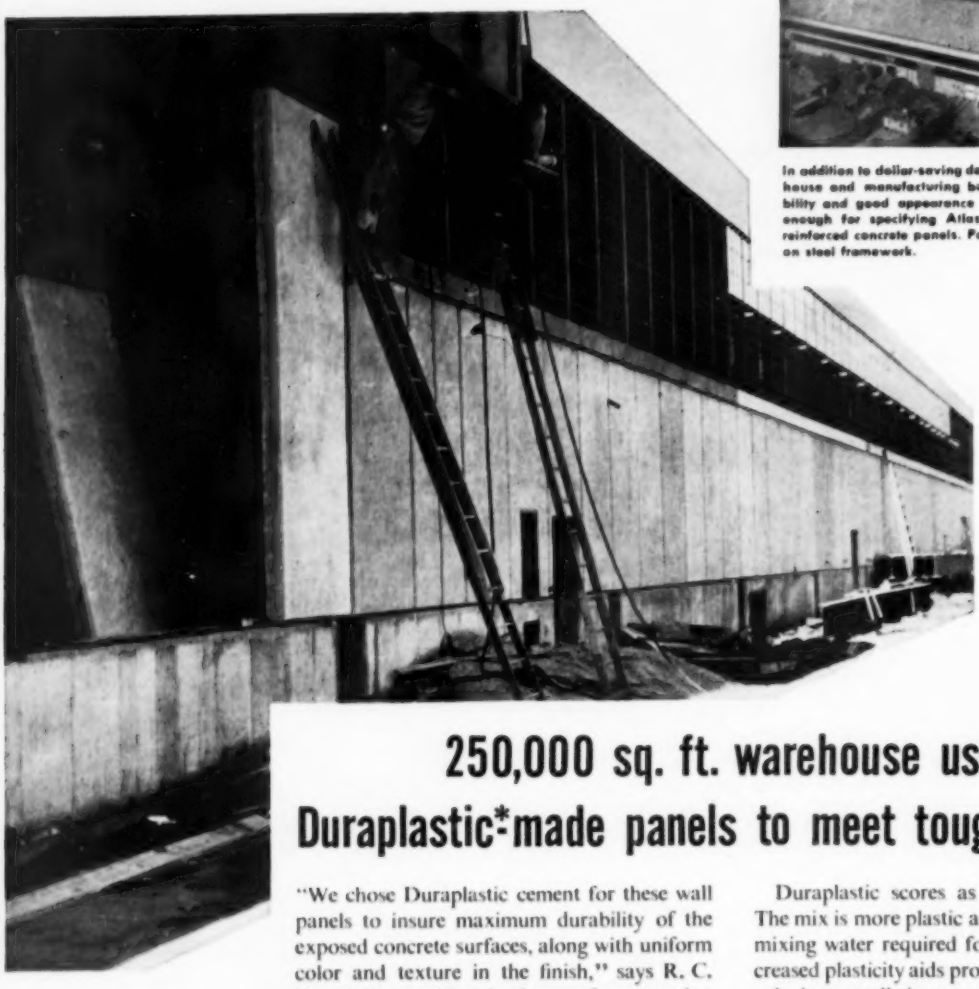

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Consulting Engineer
Milwaukee

250,000 sq. ft. warehouse uses Duraplastic*-made panels to meet tough "specs"

"We chose Duraplastic cement for these wall panels to insure maximum durability of the exposed concrete surfaces, along with uniform color and texture in the finish," says R. C. Knoll, vice president in charge of construction for Inland Steel Products Company. And the builder backs him up:

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Atlas Duraplastic is a wise choice for durability because it minimizes water gain or bleeding and segregation . . . finished concrete is fortified against freezing-thawing weather.

Duraplastic scores as well in appearance. The mix is more plastic and cohesive, with less mixing water required for a given slump. Increased plasticity aids proper placement and results in generally improved surface appearance.

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Makes Better Concrete at No Extra Cost

"THE THEATRE GUILD ON THE AIR"—*Sponsored by U.S. Steel Subsidiaries—Sunday Evenings—September to June*

p/a views

(Continued from page 172)

that no article which is written with so little compassion, tolerance, or real understanding can serve as a basis for serious architectural discussion.

WILLIAM W. WURSTER, Dean
School of Architecture
University of California
Berkeley, Calif.

•

Dear Editor: Your letter addressed to Elizabeth Gordon (May 1953 P/A) is a model of moderation and good sense. I assume that the moderation is due to your respect for the passion and zeal, however misdirected.

I share your misgivings, however, as to the results, when zeal throws indiscriminately together everything which is disliked—for reasons and in a manner which obviously reflect the temper of hate and mistrust so prevalent generally.

The mixture is all too characteristic: Miss Gordon's zeal is not matched by her knowledge of either history or architecture. It appears quite ridiculous to have to mention it in the context of an influential editor, but historic development in the arts or anything else has never been completely consistent, or as black or white as Miss Gordon would have her readers believe.

You have made quite clear in your reply that the very people who have, on the whole remarkably rarely, committed some errors of judgment have at the same time provided the concepts, as well as the bones, sinews, and face of contemporary design.

If in the process of the development, some prophets pressed their particular passions with too great a fervor to please all, is not this very passion and "purity" the stuff of which all art, poetry, drama, politics, and faith are made? The last accusation which may be leveled at such people is that of conspiracy.

I recall that only recently an equally vitriolic, again characteristically topical "smear technique" and misinformed attack was launched against us, employing exactly the opposite reasons to those cited by Miss Gordon, but I suspect for the identical cause. I imagine that this kind

(Continued on page 176)

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p/a views

(Continued from page 175)

of attack will be leveled at anything vital enough to threaten vested interest or established habit, and that the process will continue to the end of time.

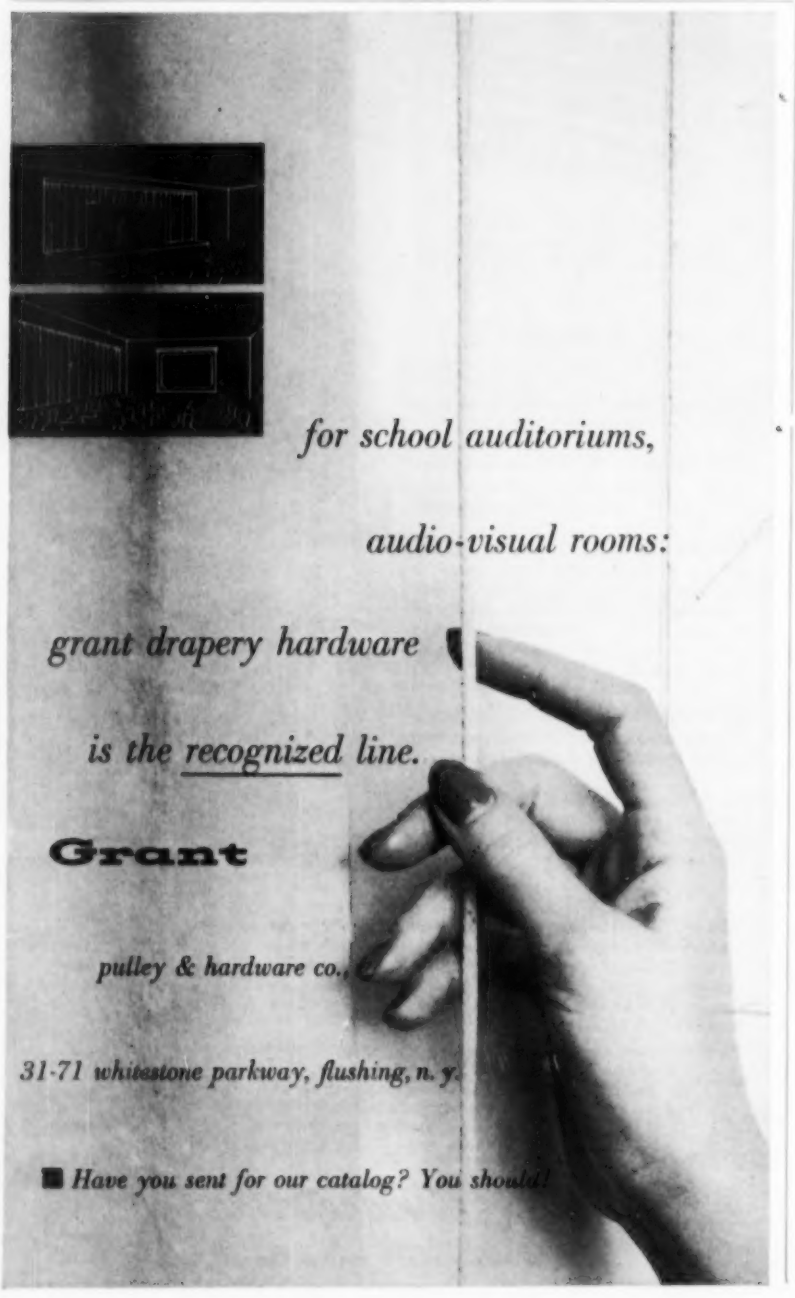
As for the "Cult of Austerity" the whole movement of some hundred years or more, of many faces not familiar to Miss Gordon, can surely be better described as essential: "clearing garbage," which in our productive economy and exuberant culture appears to collect at an increasingly alarming rate.

To cultivate sensibility under the pressures and uncertainties of our time will surely require constant vigilance to make this comparable to the sensibilities slowly developed (without the assistance of illustrated publications) in the more leisurely periods of the past.

Such vigilance would, however, be insufficient if it were not reinforced by positive demonstration, by professional designers, of *principle, order, modesty, simplicity,* and *integrity* to counteract the opportunistic pandering, vulgarity, eclecticism, and dishonesty all too often seen, but all too rarely recognized by our self-appointed arbiters of elegance and taste.

Indeed, one has to add with regret, it is high time that architecture has the benefits of more widely read criticism endowed with knowledge, discrimination, and courtesy, instead of the all too prevalent illiteracy and brashness of which the article under discussion provides a typical example.

SERGE CHERMAYEFF
School of Architecture and Planning
Massachusetts Institute of Technology
Cambridge, Mass.



notices

awards

Nineteen awards for outstanding designs in home-furnishings products made available to the consumer public during 1952, were presented to the winners of the AMERICAN INSTITUTE OF DECORATORS, ANNUAL DESIGN COMPETITION at the 22nd conference of the A.I.D., at the Waldorf-Astoria in New York City, March 22-April 2.

The 19 awards were granted in the following categories: fabrics, wallcoverings and furniture. No Citations of Merit were given for floorcoverings or lighting.

The winners are as follows: *Wallcoverings:* First Award—ESTELLE & ERWINE LAVERNE, New York, N. Y., for fiber-glass Lurex texture; Honorable Mentions—FRANCIS DEARDEN, H. W. E. RILEY, ALEXANDER GIRARD. *Fabrics:* First Awards—DOLORES DE MARIA, Plymouth, Mich., for linen and metallic casement, also to KARL LAURELL, Plymouth, Mich., for linen casement, spun-silk and metallic, and linen casement; Honorable Mentions—ANGELO TESTA, ALEXANDER GIRARD, KATHRYN LATHROP WELCH, JACK LENORLARSEN, ESZTER HARASZTY, MAXWELL HAWKER. *Furniture:* First Award—COUNT SIGVARD BERNADOTTE, Copenhagen, Denmark, for Danish beech chair with hinged back; Honorable Mentions—WILLIAM PAHLMANN, PETER ROOKE-LEY (two each).

Write for these technical data books from H. H. Robertson's Q-Floor library

How to fireproof Robertson Q-Floor and Structural Steel

This booklet is an exposition of fireproofing methods employed when Q-Floor is used in conjunction with structural steel framing in a multi-story building and must meet local building code requirements. It covers most problems likely to be encountered by the designer and contains charts of typical code requirements, fire resistance ratings, and framing and ceiling details, both basic and with all combinations of extras.

Design and cost factors

With the use of this book you will find you can readily compute the cost of all types of structural floors with integral electrical wiring systems and compare them with Q-Floor. The study is based upon a typical multi-story building and is replete with charts and cost studies of all components to enable you to accurately estimate for your own vicinity. A critical analysis of this nature should be included in every architectural and engineering library.

Concrete fill on Robertson Q-Floor

This is the first of a series of booklets giving recommended practices for sub-contractors working on Robertson Q-Floor jobs. It contains detailed specifications for formulation, placement and curing of the fill, together with well-documented treatises on the nature and reactions of concrete. You will find a section on shrinkage cracking and how to control it, well illustrated with authoritative graphs and charts.

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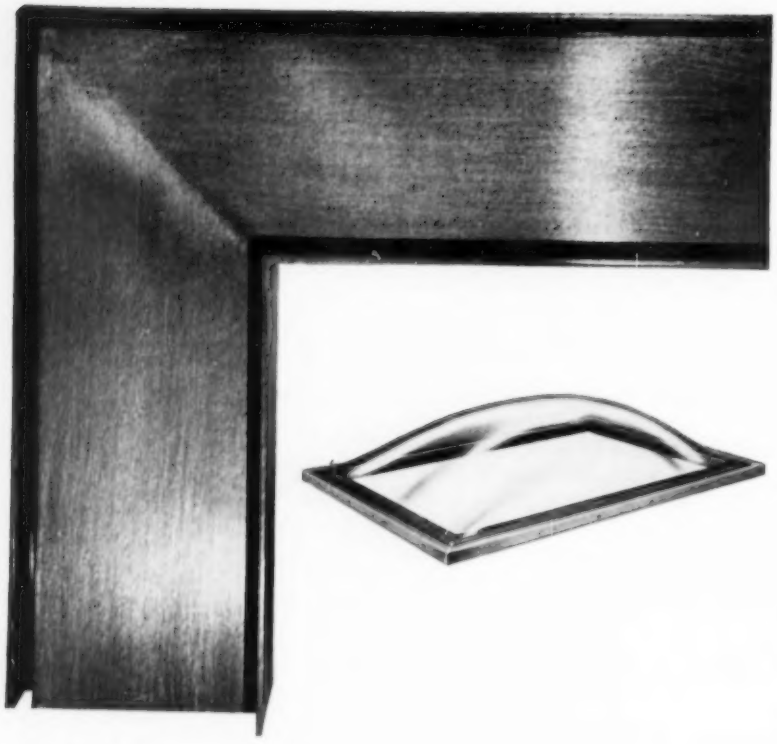

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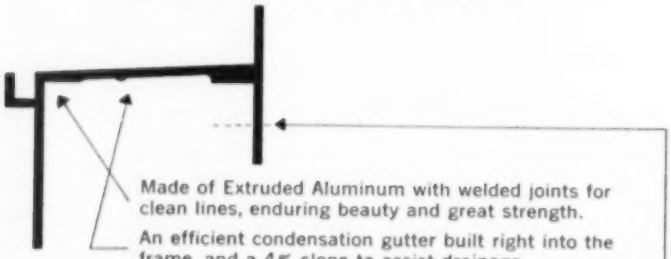

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Wasco Flashing Company, 90 Fawcett Street, Cambridge, Mass.

totalitarian fallacy

(Continued from page 90)

large, perfectly void, and unusable spaces were created for the sake of impressive elevations. Monumentality contradicts life: it creates a *false architecture.*

Or let us analyze a constructional example: the new airport of Berlin-Tempelhof (built by Ernst Sagebiel) had a steel canteliver facing the runways. On the other side, this canteliver had to be anchored down to the ground with steel rods. These rods, which came down vertically on the main façade, were in tension. The Neo-Classical style, which was the official one, had no form of expression for such a construction. What did they do? Huge, hollow, stone pillars were placed on the façade, with classical detailing. Proud pillars, giving the impression of carrying loads—to conceal the steel rods in tension. This is an architectural contradiction.

Or let us analyze a detail: Goering's Air Ministry was as hopelessly overdimensioned as himself. The building, which in many ways was a fine one, had pillars measuring 3 by 10 feet. According to statical requirements they would need only 1 by 2 feet. We raise the question: why were they 15 times larger than it should have been? The only answer is: the monumental tendency. But this is a false monumentality. It is an *architectural lie.*

it was rather painful for architects to see these contradictions. But we cannot see them there anymore. They disappeared among the ruins of Berlin, with the Third Reich.

•

In Paris, at the International Exhibition in 1937, we observed a most extraordinary phenomenon. The German and Russian pavilions were not only similar, but nearly equal in plan and their architectural expressions. The interior of the German pavilion was cold, mercilessly axial, and humorless. The plan of the Russian one was similarly axial, and with its rich materials it resembled an immense Czarist snuff-box. Almost the only difference was that the German had a huge eagle on the top and the Russian

(Continued on page 180)

NEW

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LUMINOUS INDIRECT FLUORESCENT LUMINAIRES

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5005	Two, 60", T-17, 85W Bi-Pin Starter Type
5007	Two, 48", T-12, 40W Bi-Pin Starter Type
5008*	Four, 48", T-12, 40W Bi-Pin Starter Type
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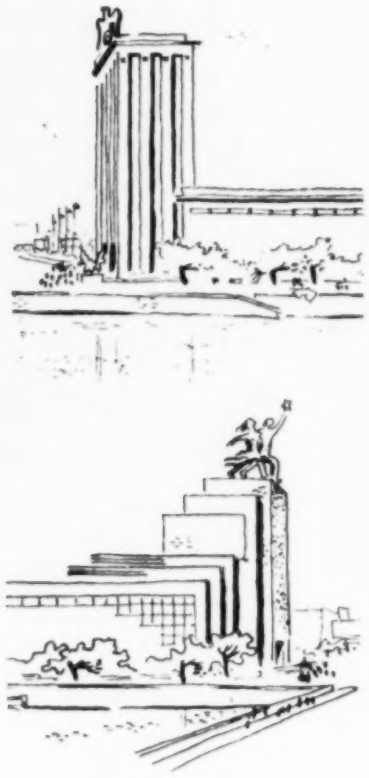
totalitarian fallacy

(Continued from page 178)



two huge figures holding a red star. The pavilions confronted each other, like two monsters before a fight. It was not only a remarkable, but a true picture of the similarity of their ideologies.

The development of Russian architecture grew on parallel lines with that of the German. Till about 1928 it showed a radically modern tendency. It was often extreme and too experimental. Though it was materialistic, the trend was international and modern. The great program of socialist reconstruction gave an excellent opportunity in the building field. They invited leading architects from throughout the world. Among many others, Albert Kahn from the U. S., Ernst May from Germany, and Le Corbusier from France, worked in Russia. But this phase did not last long.

Russia has since turned her back on the new architecture and has adopted a heavy neo-classical style depressingly like that favored in Nazi Germany. We might date this trend from the competition for the Soviet Palace in Moscow.

(Continued on page 182)

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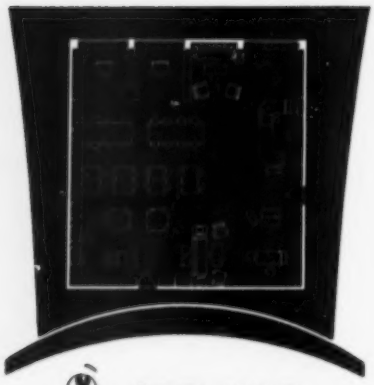

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New Life
LIBRARY FURNITURE

totalitarian fallacy

(Continued from page 180)

This competition was a climax in the world of Soviet architecture. The construction of a building of this importance, in the center of Moscow, posed a decisive problem—affecting the trend of Soviet architecture.

•

But the judgment was contradictory to the declaration of the Soviet press, which stated: "that the Palace of Soviet must not look like the works of the past, must be specifically proletarian and must not, above all, resemble the realization of Capitalist architecture, because it is not a parliament, not a temple, but the symbolical expression of the magnificent results of the proletarian dictatorship." On the contrary, the judgment was made on quite a different basis. The scientific and utilitarian organization of modern architecture was rejected, as an attribute of "poverty." The idea was that, "we must show that we can also build palaces."

It was an international competition to which 272 projects were submitted from the whole world. Some of them—as Le Corbusier's—were excellent and very advanced in design. But the Russians chose for execution the project of Iofan, a Russian architect, whose plan was neoclassical and extremely reactionary. The final scheme, which is now under construction, is an example of "*petit bourgeois* symbolism," which is a big disappointment throughout the architectural world. Looking at the project, one's first genuine impression might be that he is confronted with a wedding cake. But this

(Continued on page 184)

MAX HOFFMAN

President and General Manager of Ludman Corporation—inventor of the world famous Auto-Lok window operating mechanism.

Ever move an entire plant...and try to maintain production?

Ludman has! Not once, but twice in 10 short months.

Moving an entire plant with tons of machinery, finished products and stockpiles of raw materials is a major operation any time. Especially when the plant to be moved covers over a hundred thousand square feet of jam-packed production facilities and is operating at peak. Most manufacturers would shy away from it. But the necessity of having to hurriedly vacate government owned property at Opa Locka Marine base to make way for the military—the necessity of having to take temporary quarters at Miami International Airport while a new plant was being erected—is the problem that faced Max Hoffman and Ludman.

Careful advance planning plus perfect teamwork on the part of every employee—from top management to truckers—made both moves possible in record time. Loss of production was held to a minimum.

"A task seemingly impossible has again been accomplished" stated President Hoffman. "We are proud of our entire employee organization and their wholehearted enthusiasm, efficiency and expediency which made both moves possible."

"Now at our new plant" Hoffman said, "only the growing pains of expansion can provide any further problems." And with 6 acres on which to expand and grow this should be no problem for Ludman.

Ludman's new plant is one of the most modern in the world. It comprises over a hundred and forty thousand square feet of floor space.

Designed to afford maximum light and ventilation, Ludman's new plant is a model for other manufacturers to survey. Ludman Auto-Lok awning windows and Windo-Tite Jalousies are used throughout in an expanse of eight-foot high glass walls of light. Engineers who have viewed the new plant are tremendously enthusiastic about the effect this window and jalousie installation will have on employee productivity and well-being.

Building officials state—"the use of Ludman Auto-Lok Windows and Jalousies has increased the value of the plant by many, many times the difference in cost between the Ludman Window and ordinary commercial windows."

Obolar & Clarke were the design engineers with A. Herbert Mathes, AIA, consulting architect. Special electrical installation was made by Henry Nelson. All are Miami Beach firms.

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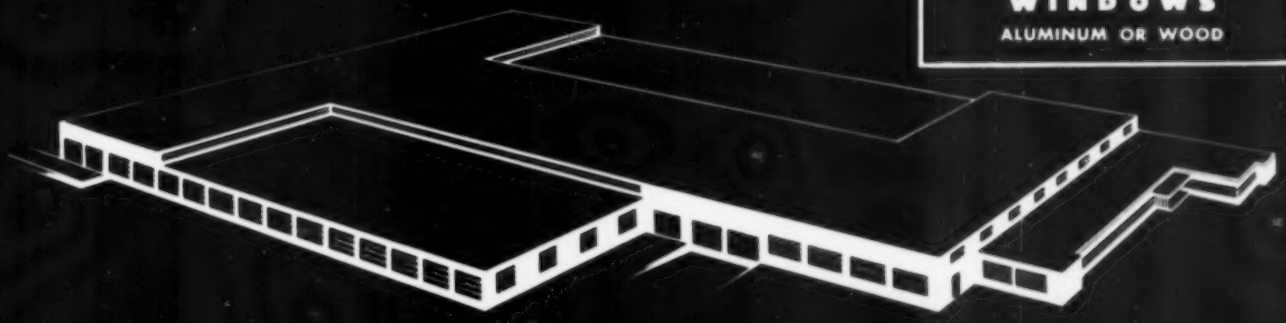

Big things are happening at Ludman! With architects all over the world specifying more and more Auto-Lok Windows, Ludman has increased production again! Now in this new plant—**the largest in the world manufacturing awning windows and jalousies**—Ludman is in position to supply all demands!

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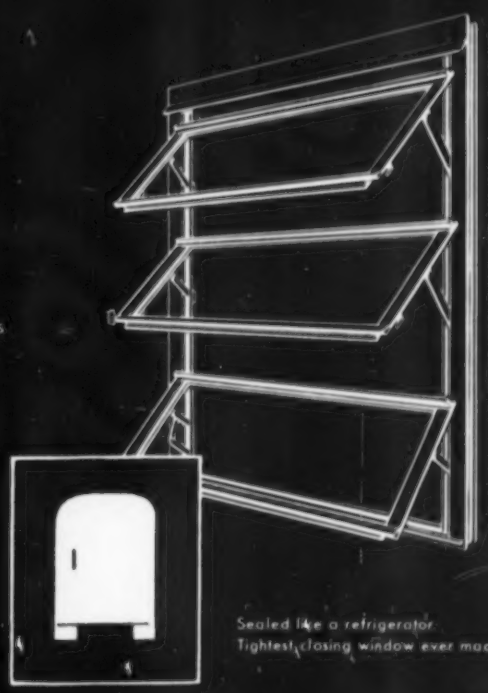

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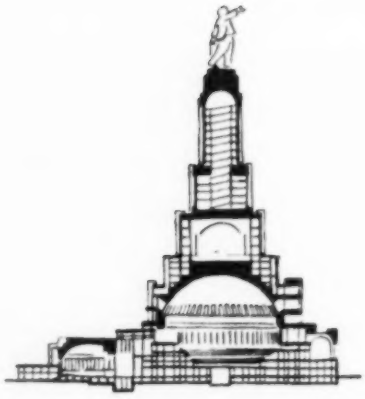
totalitarian fallacy

(Continued from page 182)

will soon change, on recognizing the scale. The palace is intended to top every known building in the world! Its total cubic content is 20 million cubic feet. In the final plans, the height of the statue of Lenin was increased from 235 to 325 feet!

It is not its height alone which is amazing, but also its construction. The towerlike superstructure, with its immense weight, is placed right over the circular main auditorium, which seats 20,000 people. The solution required a bridge-like steel construction: a waste of material and energy for a forced academic gigantilism.



The reaction against the modern in Russia is due to various factors; these are partly technical. Modern architectural forms require a developed and highly mechanized building industry. Russian industry did not produce the necessary building materials and Russian workmen lacked the needed skills. Most of the modern buildings failed in technical execution, they were poor in quality. So, the Russians turned to the more tried, conventional building methods to which they connected the conventional academic styles. But the all-important factors were propaganda and prestige. Architecture was meant to be the symbol of the successful establishment of the new regime.

The Russian peasants served a thousand years under czars and counts who had castles and palaces with plenty of columns. The people associated these with grandeur and solidity; they were impressed by them and these classical elements symbolized security and prosperity.

In a "police state," or "military state," as Russia is often called, one has to use language similar to that used in a military drill. It is said that this is the most common and most simple language of the Army. So, the Russians adopted the commonplace monumental and the hackneyed classical.

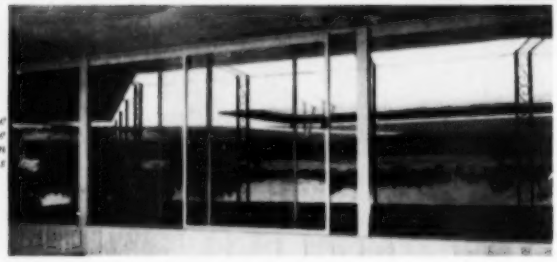
•

While the German troops were fighting far inside Russia, someone brought to Berlin a photograph of the Soviet Palace in Kiev. He showed it to Architect Albert Speer, who was at that time chiefly responsible for the German "official style." Speer looked at the picture and

(Continued on page 218)

Arislide steel sliding doors

Walter Wagner Architect Ewing School Fresno, Calif.



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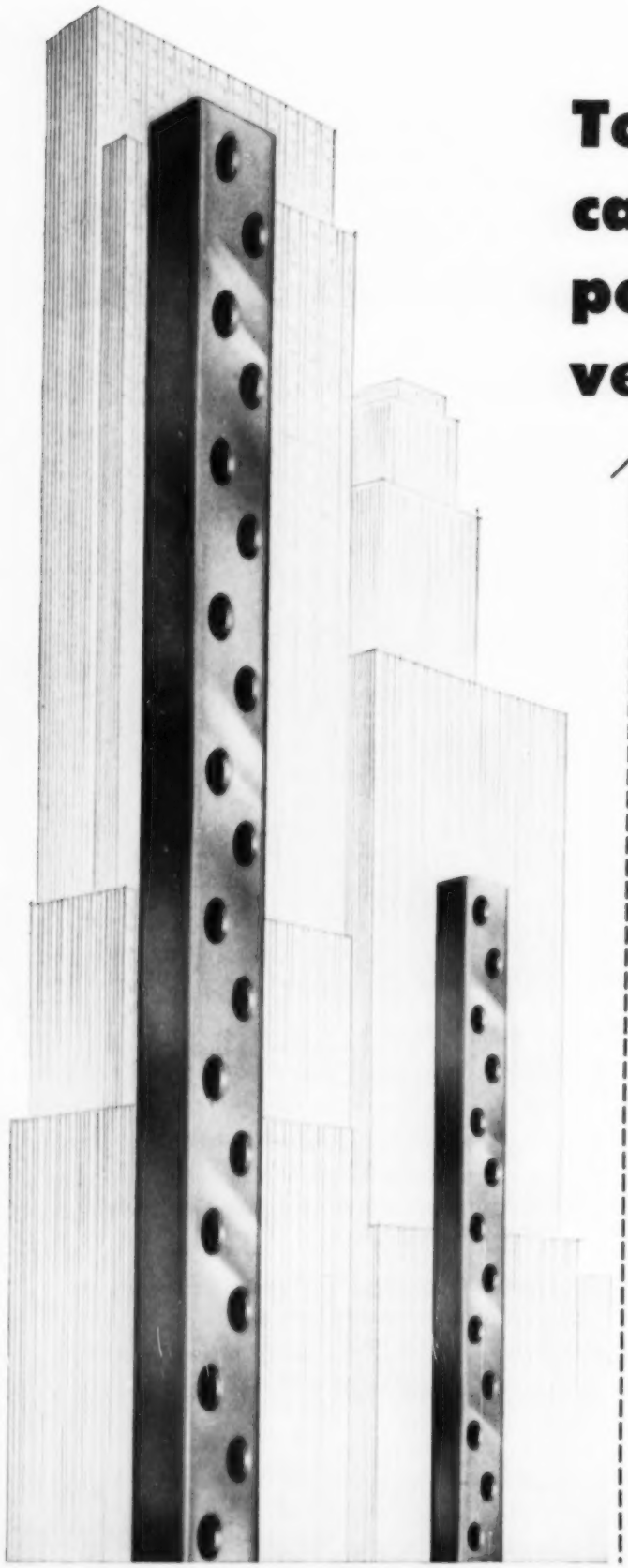

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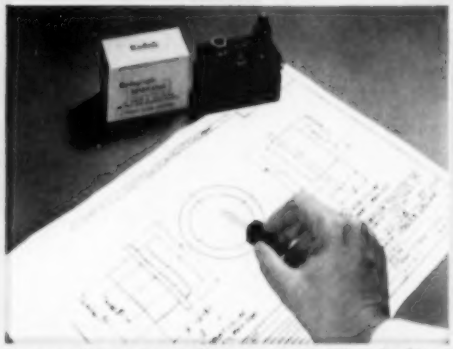

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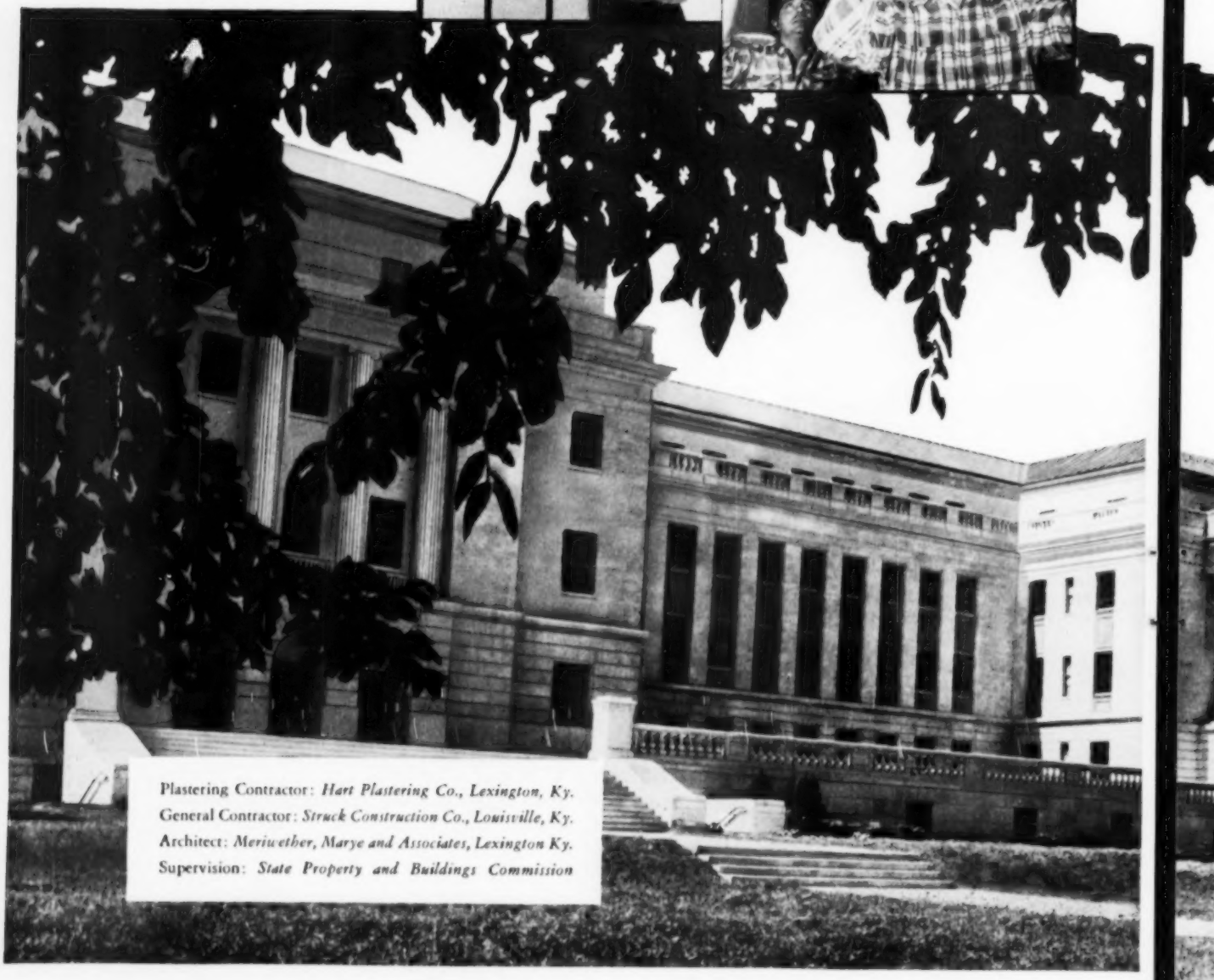

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Kentucky's new Capitol Annex Office Building in Franktort successfully combines classic beauty with modern functionalism, yet retains the prime advantages of each. Patterned in style after its "sister" building, the State Capitol, the new Capitol Annex provides needed office quarters for the various State Government agencies.

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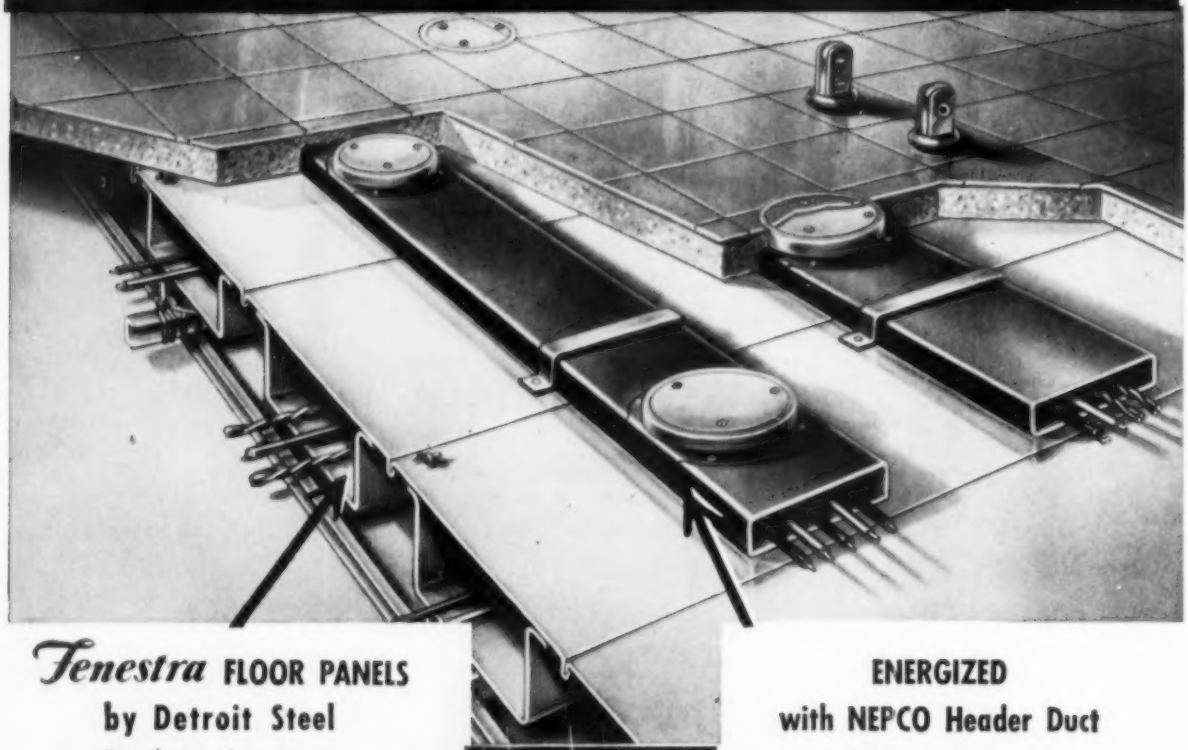
Announcing **FENESTRA-NEPCO**

The NEW ELECTRIFIED cellular floor system



Fenestra FLOOR PANELS by Detroit Steel Products Company

The cellular steel load-supporting structural panels couple maximum strength with light weight . . . offer maximum cross sectional area (30 sq. inches) for wire fills. Cellular raceways are used for installation of electrical wires for power, light, telephone, and intercommunications.

ENERGIZED with NEPCO Header Duct Wiring System

National Electric Header Duct is an all-steel grounded feeder raceway from the distribution panel to the raceways formed by the structural steel floor panels. Electric wiring through this combined raceway system provides the availability of electric outlets in any square foot of floor area.

cuts building costs
simplified electrification

ELECTRIFLOOR

Fenestra-Nepco Electrifloor is (1) a structural unit; (2) a complete electrical system; (3) a subfloor—all in one package! It combines the experience and products of two leading manufacturers—Detroit Steel Products Company and National Electric Products Corporation. It provides architects and engineers with the *latest* developments in electrical floor distribution systems utilizing the large area ducts of cellular building panels.

Reduces building costs. Less structural steel and concrete required.

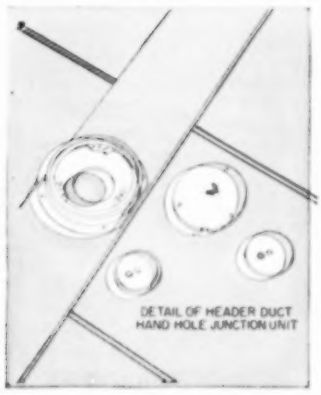
Reduces erection time. Three men can lay over 100 square feet of floor in less than an hour.

Provides earlier occupancy. Floors go in to form working platforms as frame goes up.

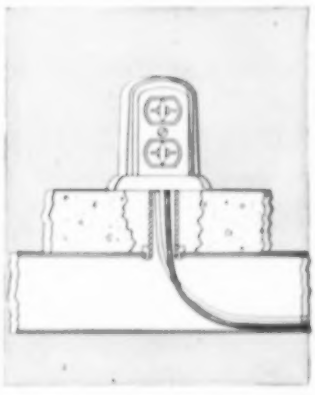
Provides complete, simple electrification. You can have electric outlets anywhere, any time—*without* disrupting business, *without* costly alterations.

Fenestra-Nepco engineers are ready to work with your architects, engineers and contractors. Write for our booklet and details on new Electrifloor installations in Detroit's City-County Building.

HERE'S HOW ELECTRIFLOOR WORKS:



1. Header duct is installed on top of cellular steel panels according to pre-determined layout. Access holes are used to feed the panel cells selected for electrification.
2. Electrical service fittings are installed as specified in office layout. Service fittings may be established anywhere along the cellular raceway.
3. Selected raceways or all raceways may be energized to accommodate any requirements of power, light, telephone or inter-communications.
4. Cellular raceways may be energized when header duct is installed or at a later date. Service extensions or relocations can be made easily, in less time than ever before, with less interruption to office routine.



Listed and approved by Underwriters' Laboratories, Inc. Sold through leading electrical distributors.

Nepco Header Duct has successful, time-proven features. Produced by the leading manufacturer of electrical roughing-in wiring systems.

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National Electric Products

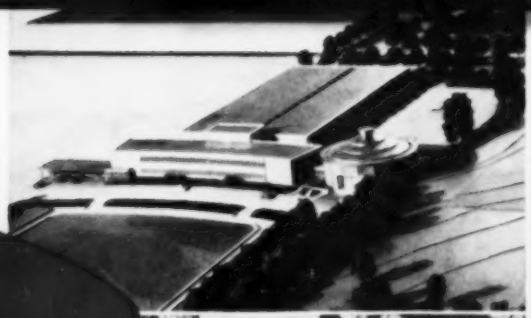
PITTSBURGH, PA.

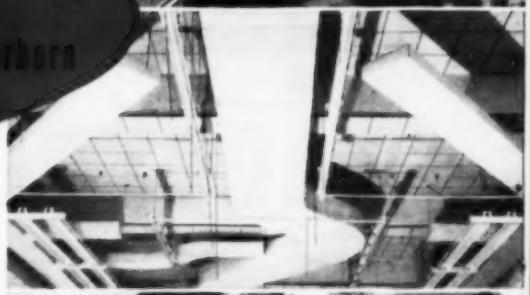
3 Plants • 7 Warehouses • 34 Sales Offices

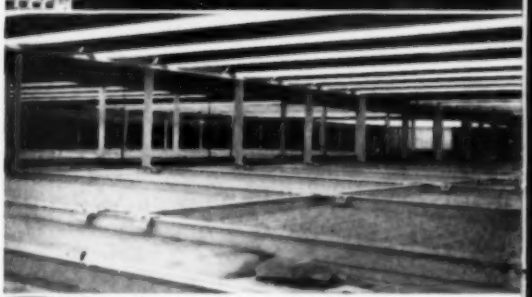
Congratulations to the ford motor company

on the beautiful new engineering and research center in Dearborn

Among the notable architectural features in this outstanding new building is the Smithcraft Area Illumination installation of overall lighting.







1. Lighting installation covers network of ducts and beams without interference with other services and with a minimum of supports to the ceiling.

2. The electrical element is completely installed and lamps are lighted. Men are installing framework for louvered shielding.

3. Louvers are being installed. Glass, plastic, lens . . virtually any light diffusing medium may be specified for Smithcraft Area Illumination.

4. View between shielding and electrical element. Plenty of room for efficient lamp replacement. Acoustical metal pans are supported entirely by the lighting installation.

5. Lighting installation conforms to contour of the building. The system permits the architect a new freedom of choice as to size, pattern and shape, shielding, intensity and periphery.

smithcraft area illumination is today's outstanding expression of an evolution in lighting. For centuries the only light source used by man emitted its illumination **from a point.** With the relatively recent development of **the linear source of light** in fluorescent lighting, higher levels of illumination have become economically practical and lighting has established itself as an important partner of the architect, owner and user.

Now advanced planners in architecture and illuminating engineering are thinking in terms of **area of light source.** Through advanced design and a brand new structural simplicity, Smithcraft Area Illumination has eliminated previous difficulties of installation and servicing. The system is actually one lighting "fixture" when installed. There is no superfluous multiplicity of supports to the ceiling and there are no complicated electrical service connections to clutter the plenum. And, most important of all, Smithcraft Area Illumination is economical, efficient and extremely easy to install.

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There are three separate installations of Smithcraft Area Illumination in the Ford Engineering and Research Center with a combined area of more than 65,000 sq. ft. Intensities in the three areas are 112, 100, and 108 footcandles.

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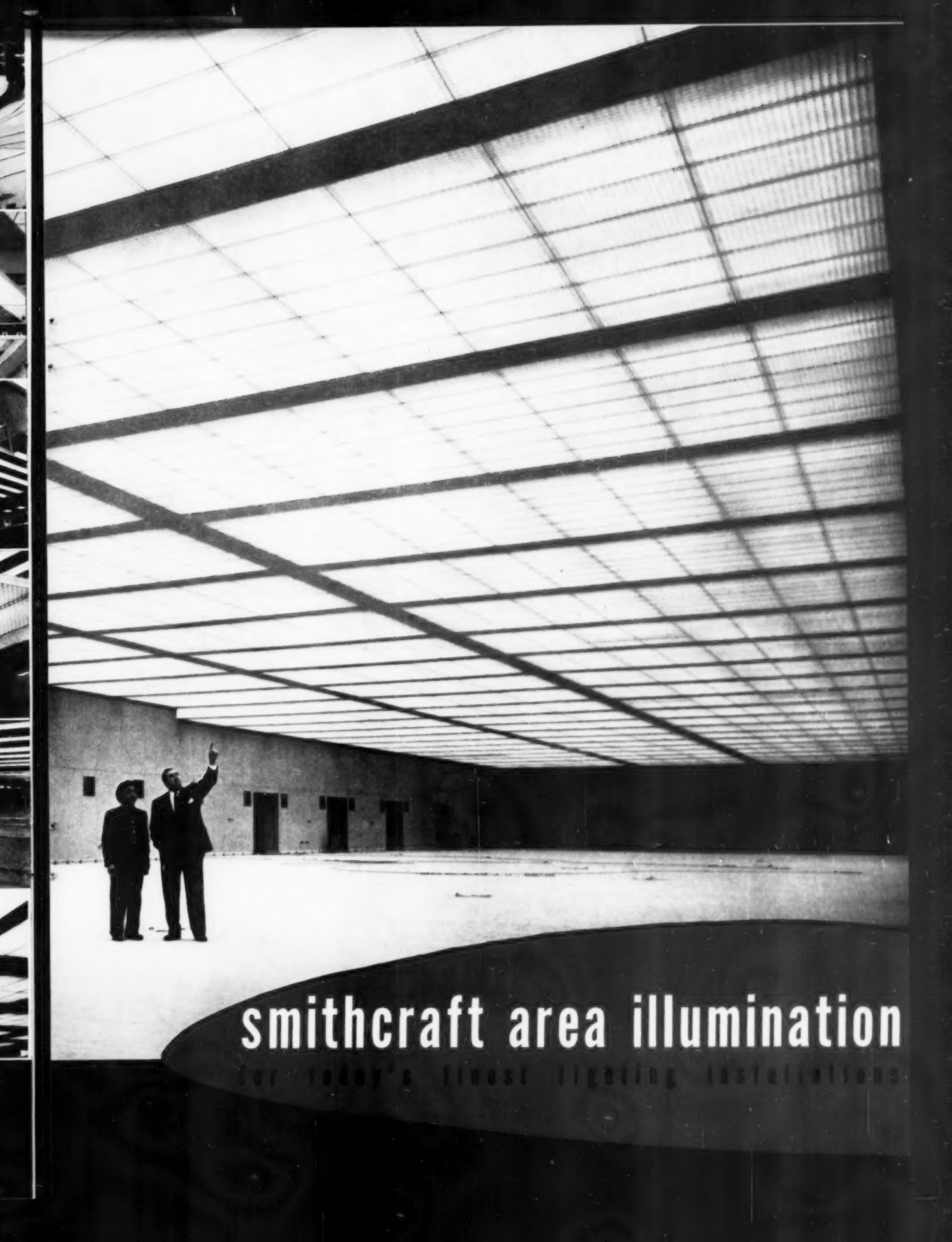
ELECTRICAL CONTRACTORS: Harlan Electric Company, Detroit

DISTRIBUTORS: General Electric Supply Company, Detroit

Smithcraft

LIGHTING DIVISION

CHELSEA 50, MASSACHUSETTS



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for today's finest lighting installations

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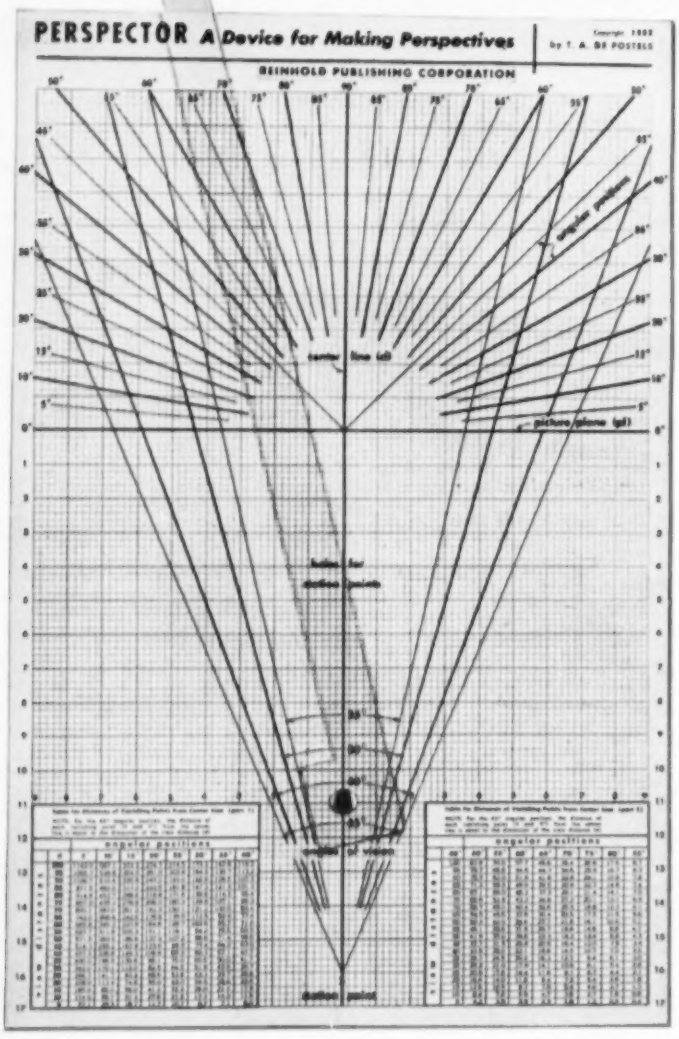

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Kalistron walls triumph over Grime and Scuffs

Cleaned by a Damp Cloth

Mounted on any firm, dry wall!

In corridors, in restaurants, in stores or dinettes — in thousands of places—there's a new miracle for walls (or built-in furniture and accessory pieces, too): Kalistron, a magical vinyl covering that is grandly beautiful but *can't be disfigured by the roughest wear!* Its secret is simplicity itself — yet amazingly unique. KALISTRON for walls is, first and foremost, a SHEET OF PURE ULTRA-THICK VINYLITE—with nothing in it . . . no filler, no pigmentation, no impurities . . . just pure super-wear Vinylite.

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UNDERNEATH the pure, clear, transparent Vinylite—completely and absolutely guarded against scratching and rubbing — are the designer-inspired colors . . . ranging from rich, vibrant tones or deep, earthy shades to smart and delicate pastels.

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On the color side of Kalistron for walls (the side away from wear) there is also impregnated a cellulose flock, so that Kalistron can be easily and speedily mounted to most any firm, smooth, dry surface — over large areas, around corners, on curves and *columns.*

"Built-ins" or Furniture

Kalistron is also available with a three-way stretch fabric back so that it can be perfectly tailored on upholstered pieces, whether built-in or separate—exactly matching or harmonizing with the walls — offering the same wonderful advantages.

Wherever used, Kalistron means never scratched beauty that is never scratched and can be cleaned by the

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The smooth, smooth Vinylite top of Kalistron just doesn't hold dirt. A wipe of a rag and most everything slips off.

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Altogether, Kalistron is the "easy maintenance" champ.

Designer's Dream:

Call your own Colors

Kalistron is available in 29 colors, ranging from Pure White, Silver and Gold, delicate Pastels or off shades such as Chartreuse, to Wines, Dark Greens and up to Dark Blues that are almost black, and in "antiqued" duotone shadings.

In addition, Kalistron can be made in any color desired, with standard commercial matching and reasonable tolerance, to a fabric, paint or other accessory color.

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When applied to an incombustible backing such as plaster, Kalistron meets all requirements of Federal Specification SS-A-118a and the rigid fire code requirements of the New York City Board of Standards and Appeals well known as being among the strictest in the country. You can be certain that properly applied Kalis-

Beautiful over Columns, Curves

This splendid plastic covering can be mounted around a column of any shape — perfectly round, with flat concave sides, or flat sides with eight sharp corners. Stripes laid for special effects or around ed. Ka

For smart effects that take any punishment—

Kalistron in cafe lounges shows all its many advantages. First: highly decorative on walls and furniture. Plus: beauty that never shows scuffs and always wipes clean!

Big Savings

Long-Te Investme Low Cost

Kalistron is an provement that pays itself in and years of lous wear solid in long last replace painting rating dirty labo eas it

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Gruesome Foursome stopped by colorful, elegant, super-tough Kalistron—vinyl plastic wall covering

They'll be careless, rough and sloppy, but they'll never make a scratch on colorful Kalistron because scuffs, scrapes and bumps can't bruise it and can't reach the designer colors that are completely shielded by the super-strong Vinylite top. Dirt, dust and smears are speedily and easily wiped off with a damp cloth or soap and water.

Complete Unity Achieved:

Furniture and Walls Married by using same Plastic Covering

Kalistron is not only a superb wall covering but also a magnificent upholstering material.

For upholstering, it is backed with a 3-way stretch fabric so that Kalistron can be perfectly tailored. It fits to any shape desired, can be pleated, tucked and tufted.

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Fabric backed Kalistron is available from stock in Kalistron's twenty most popular colors. The other colors can also be backed with fabric for orders in reasonable quantities on special order and, just as with Kalistron for walls, special colors can also be commercially matched.

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To show *yourself* the dramatic quality of Kalistron—and, incidentally, equip yourself to make the same comparative test on all other plastic wall and upholstery coverings — send for the free Nail File Test Kit, and file data of all Kalistron's technical factors.

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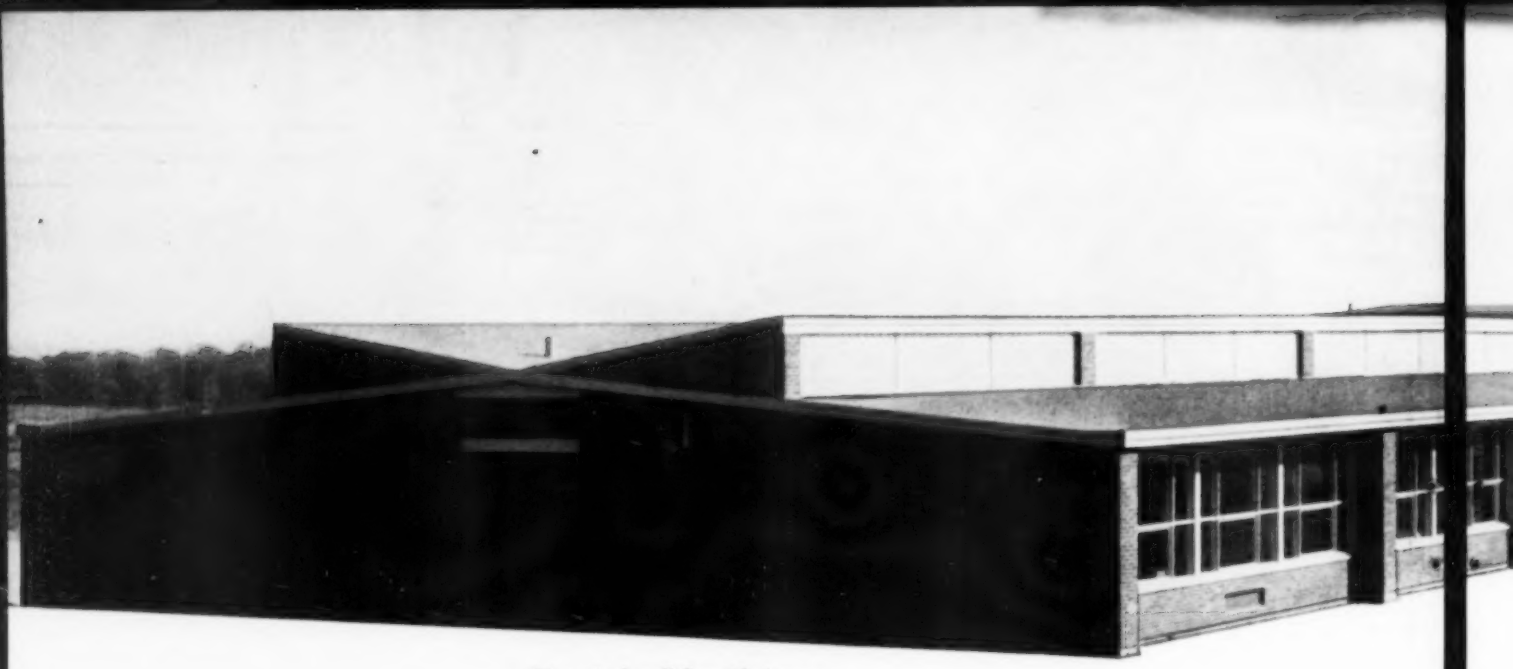

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5. Thickness: ½", 1", 1½", and 2".
6. Fabrication: Integral to 1", glued to 2", stapled to 2".

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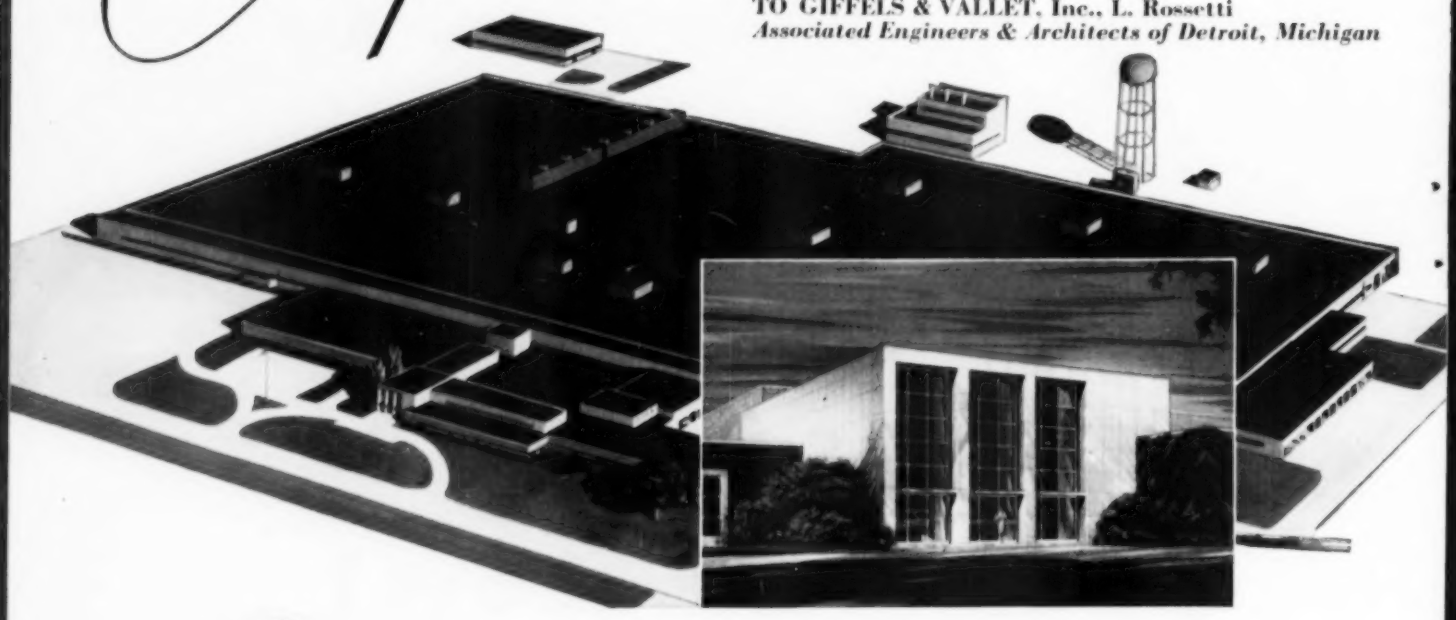
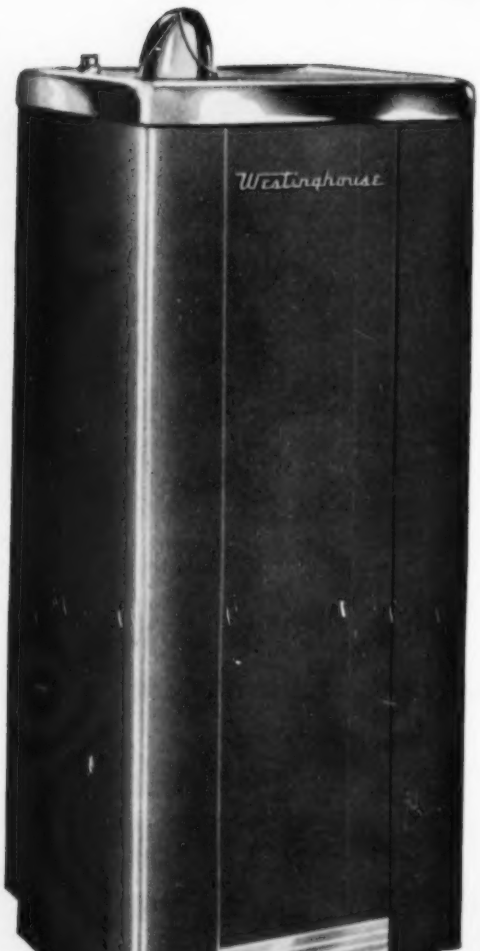


Lincoln-Mercury Assembly Plant . . . Wayne, Michigan



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This comprehensive book covers the professional, business, and legal aspects of architectural practice. Commissions for professional services are traced in minutest detail from the day the client arrives to the last payment for work performed. The social and economic implications of contemporary practice are translated in terms of ready-to-use forms, guides, advice, graphic illustrations, and the like. Accounting procedures, bookkeeping systems, almost every procedural form an architect requires for his practice, agreements of every nature, specifications, insurance and bond requirements are all presented in orderly sequence.

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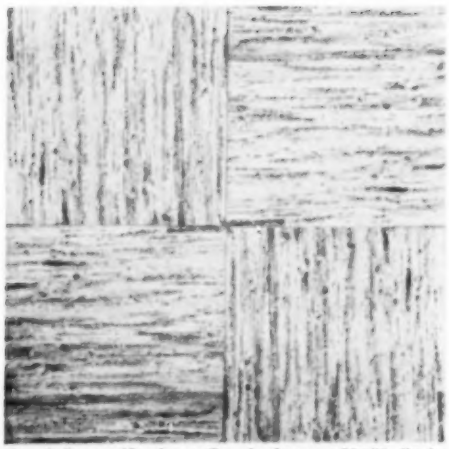

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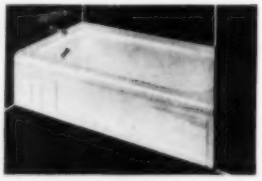

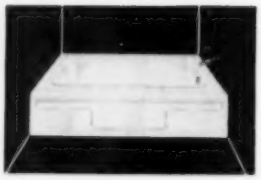

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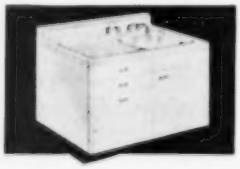

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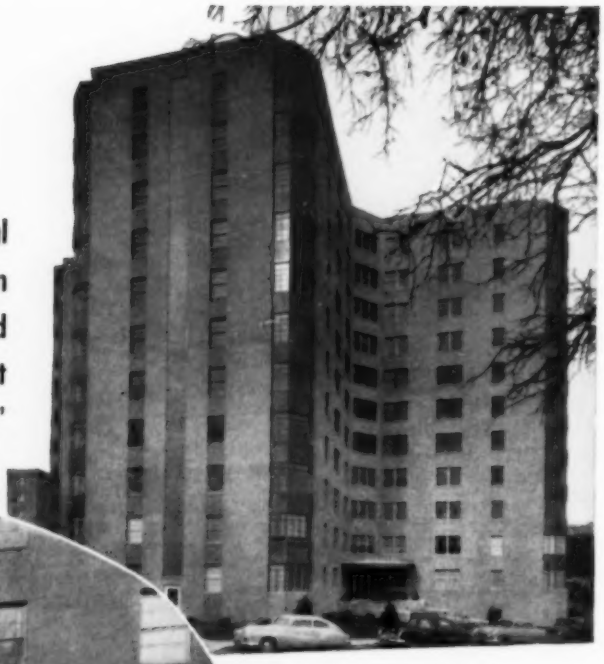
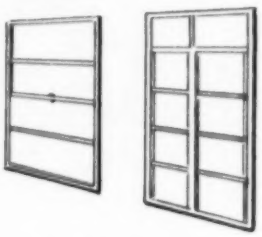


Rorick Apartments, Omaha, Neb.
M. J. Lahr, *Architect*
Rorick Construction Co., *Contractors*



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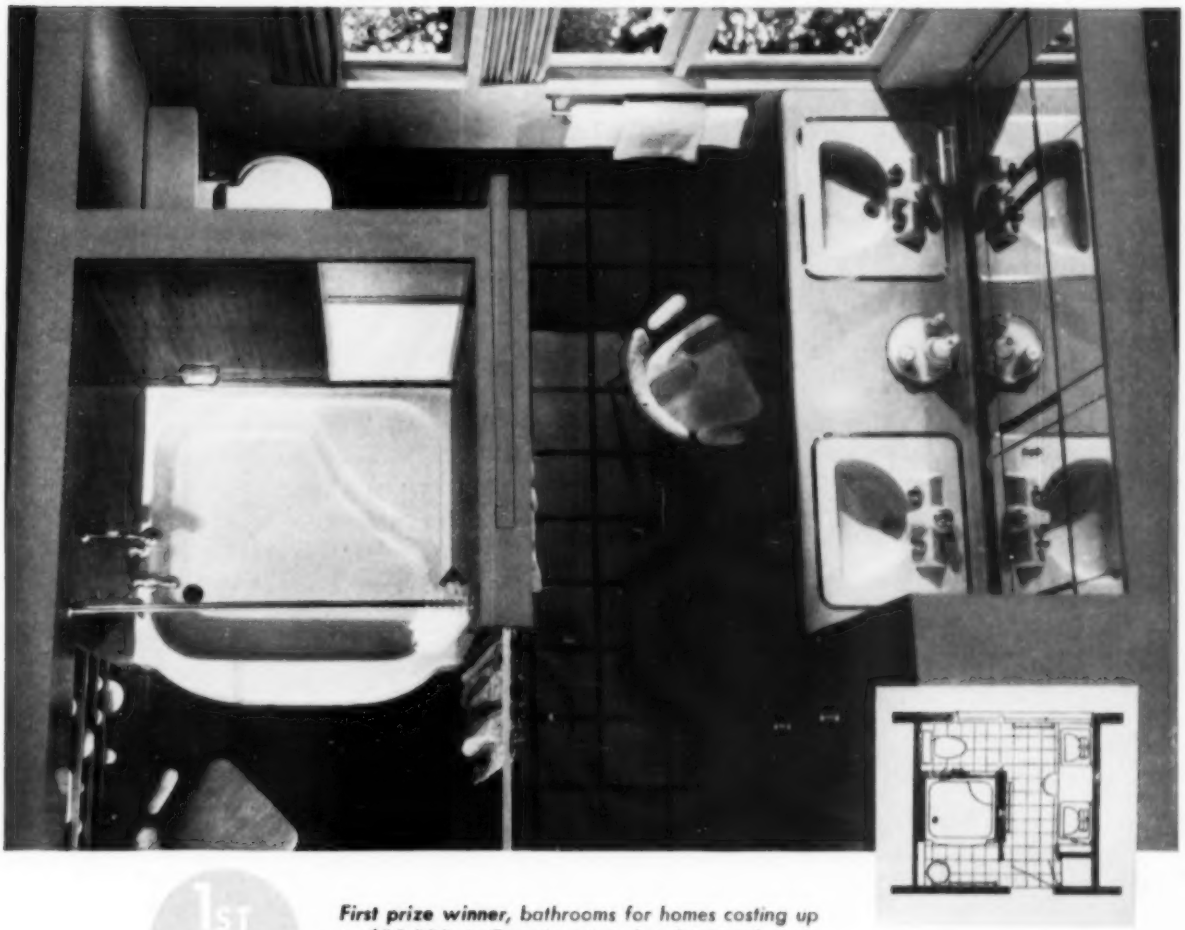
CRANE'S COMPARTMENT BATHROOM

A prize-winning room plan from Crane's national architectural competition



1ST PRIZE BATHROOM

First prize winner, *bathrooms for homes costing up to $25,000, in Crane's national architectural competition—designed by J. A. Curtis, graduate student, Massachusetts Institute of Technology.*

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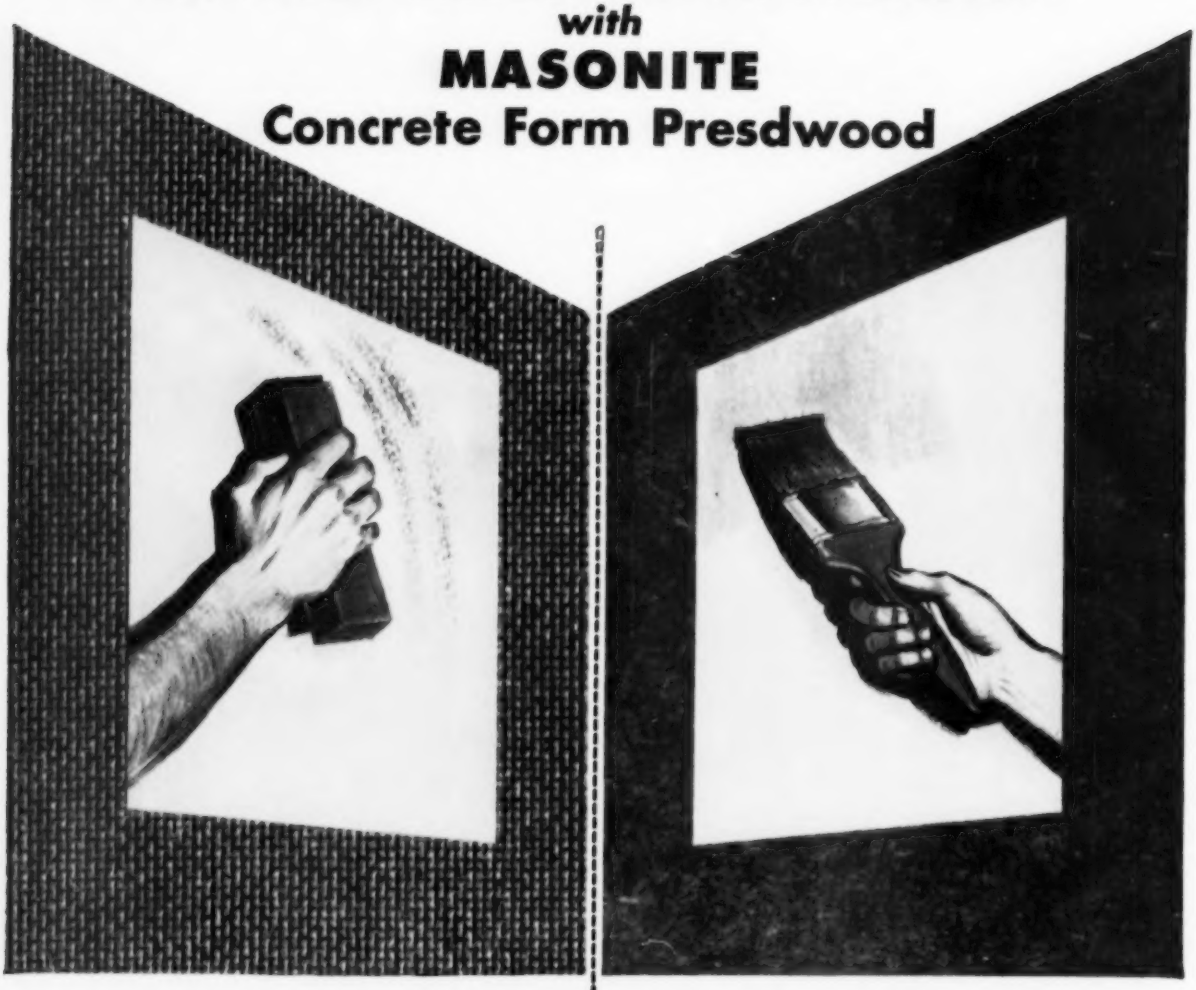

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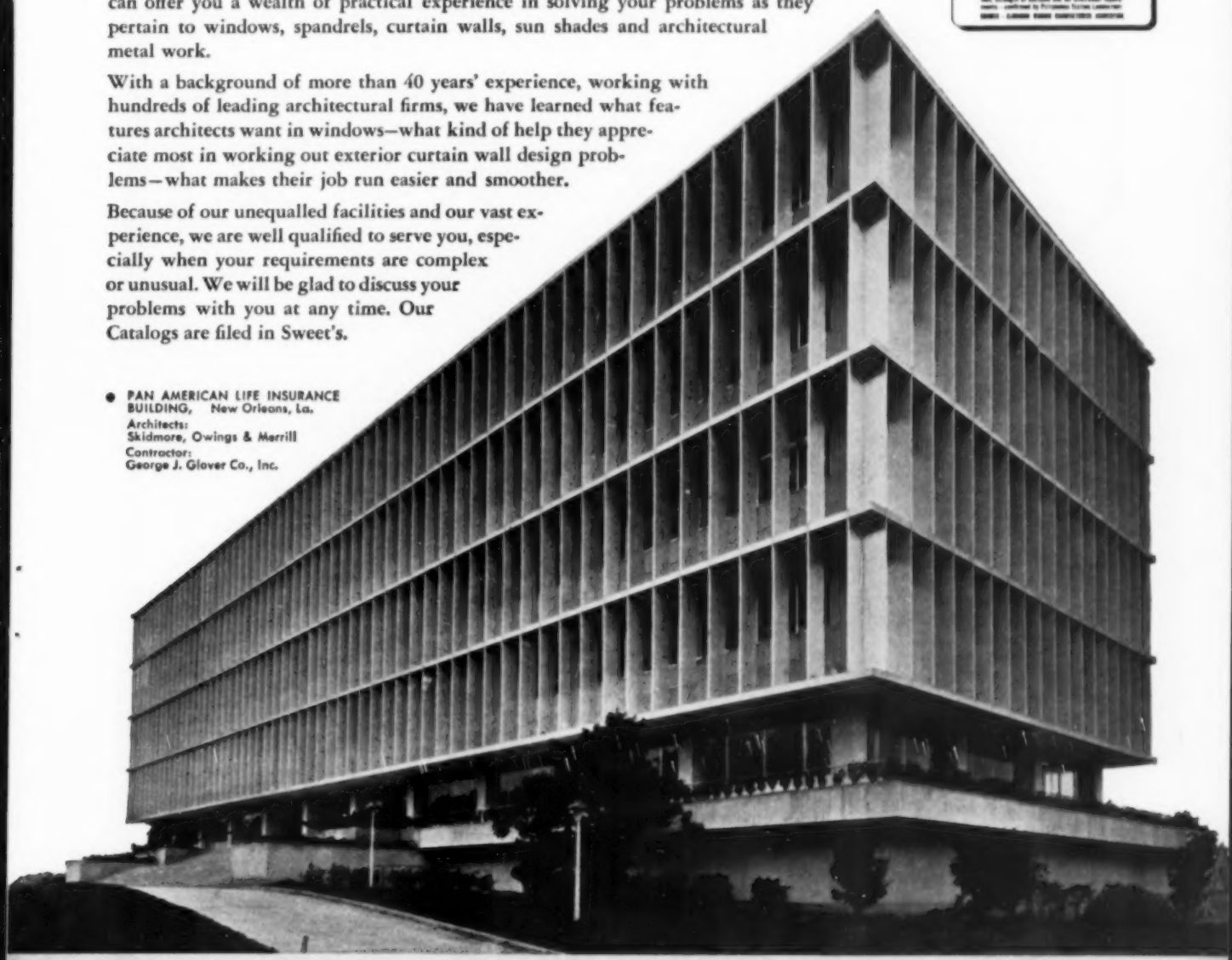

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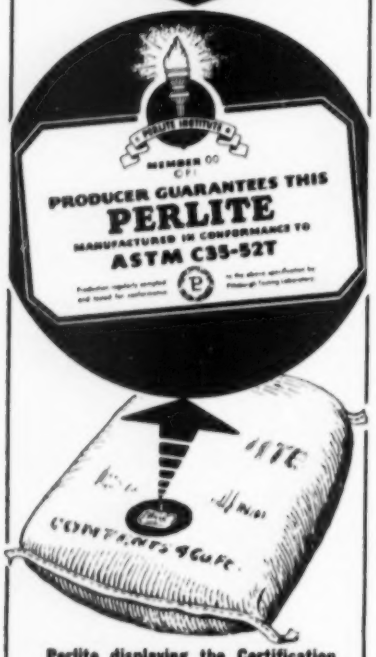

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totalitarian fallacy

(Continued from page 184)

asked: "Where is this *German* building?" This most prominent architect of Nazi style, could not see any difference, at first, between a German and a Russian building.

Actually, there *is* a difference, but only in details. The Germans used much finer proportions: theirs was an eclectic style. The heritage of a refined classical period, the tradition of their great architect, Friedrich Schinkel, was still alive in Germany. But as the Russians use heavy and clumsy proportions, their buildings are mostly crude and depressing.

In the Russian 5-year plans, building of social housing has been projected. They plan to increase the dwelling area from 50 sq. feet per person to 56 sq. feet. These planned areas are small, because they include not only the rooms, but also the kitchens, corridors, washrooms, etc. However, it does not seem likely, that they can carry their planned improvement through. At present, the majority of the population in Moscow is housed in unbelievably congested quarters. Generally, two families live together in one room, and a family considers itself happy if it has one room for itself, without sharing it with someone else. Though they build apartment blocks; these are usually four-floor walk-up types, with poor installation and small flats. But what do we see on the façades? Huge, proud, classical columns; the symbols of wealth.

This is out of scale. The architecture does not consider the human beings. They live in monuments which are built to express the imperial pomp of the state, rather than to serve the people themselves. This is not democratic. It is monumentality at the expense of the human. It is propaganda in stone. It is totalitarianism.

Sometimes we look back on the times when we were afraid that the Germans of the Third Reich would rebuild Berlin as they planned. It seemed like a bad dream. Fortunately, it was exploded. For the sake of Architecture, it is our sincere hope that the plans now being drawn up in Moscow will meet the fate they merit.

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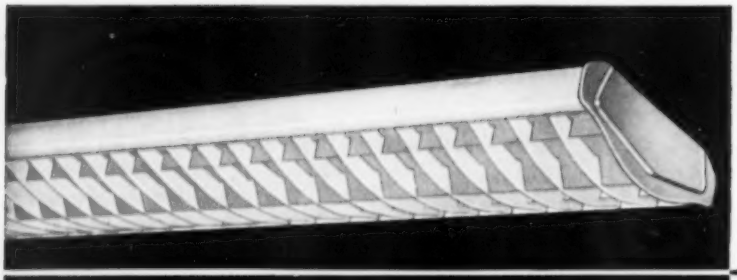

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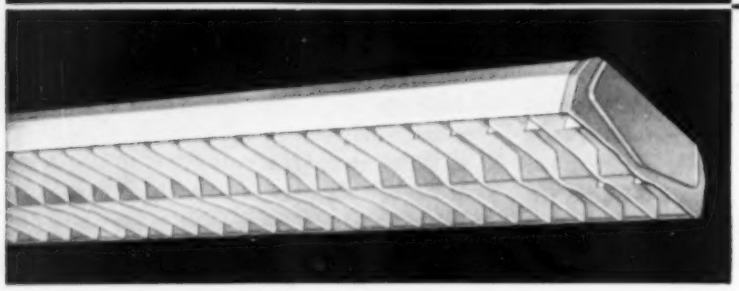

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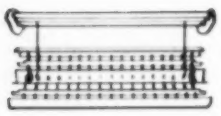

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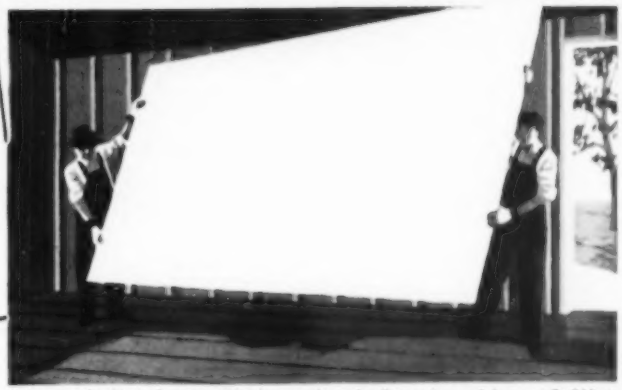

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mounting	acoustical efficiency 125	250	500	1000	2000	4000	noise reduction coefficient	weight per sq. ft.	test no.
No. 1—cemented to plaster board	.04	.21	.75	.88	.85	.77	.65	1.3	A51-98
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Johns-Manville J-M Acoustical Materials include Sanacoustic* Units, Transite* Acoustical Panels, and drilled Fibretone*

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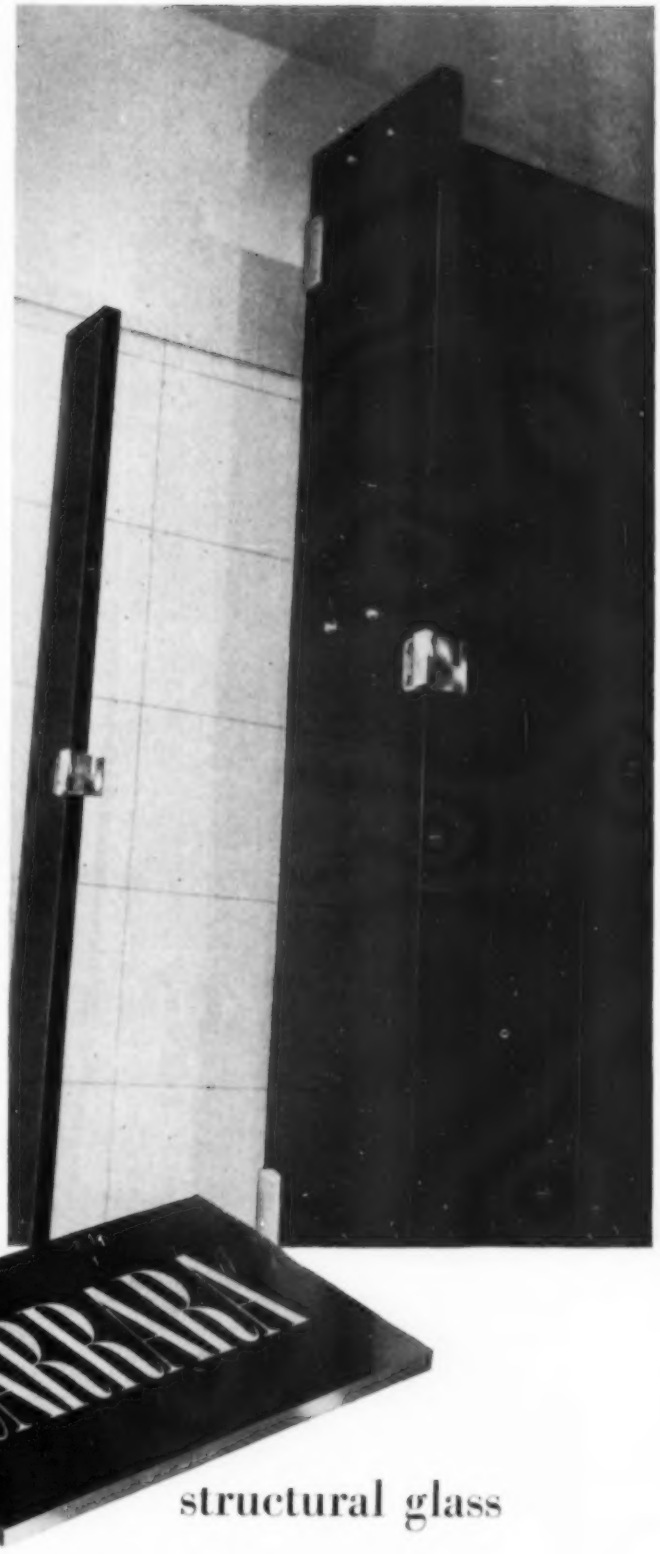
is made to order for modern washroom design



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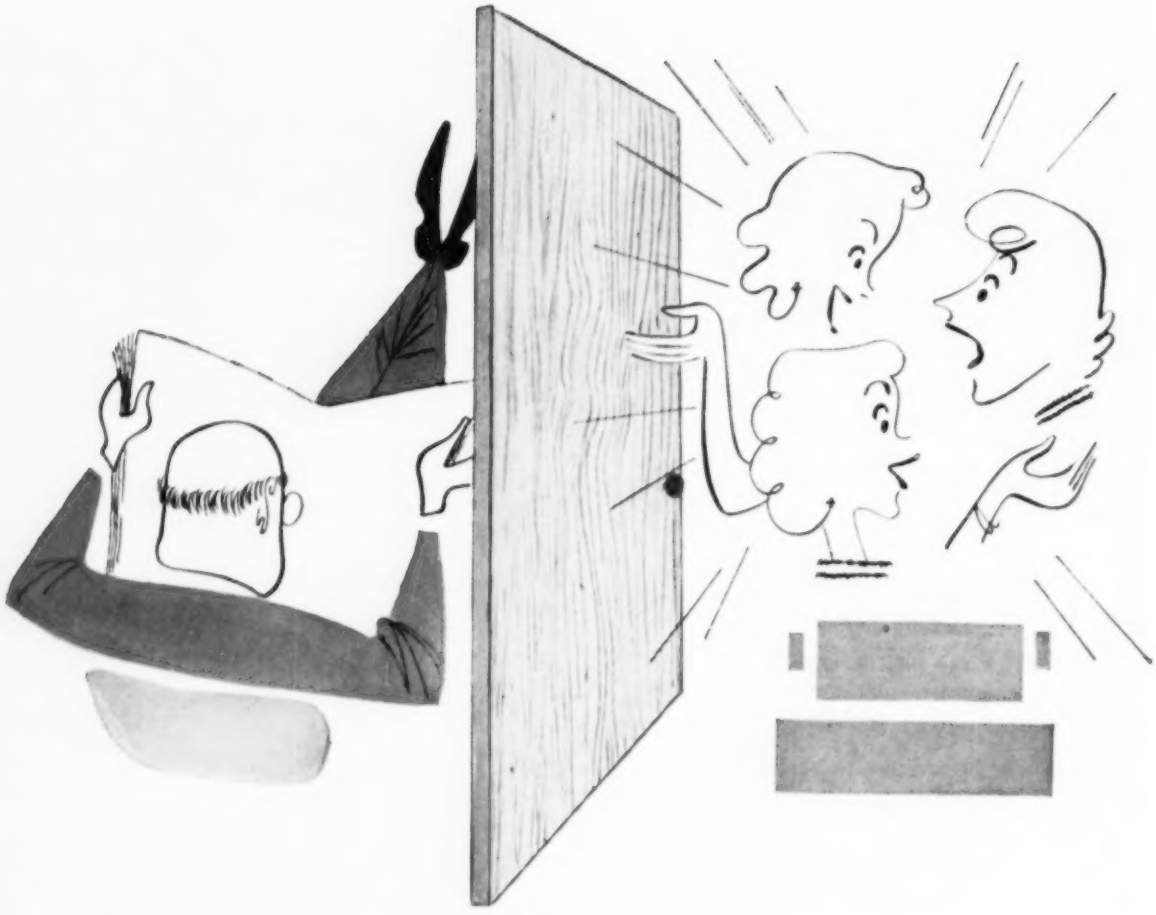

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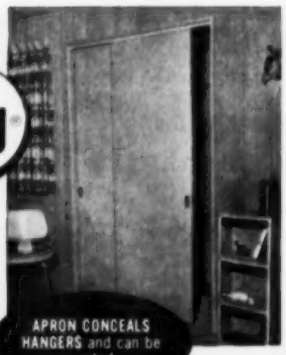

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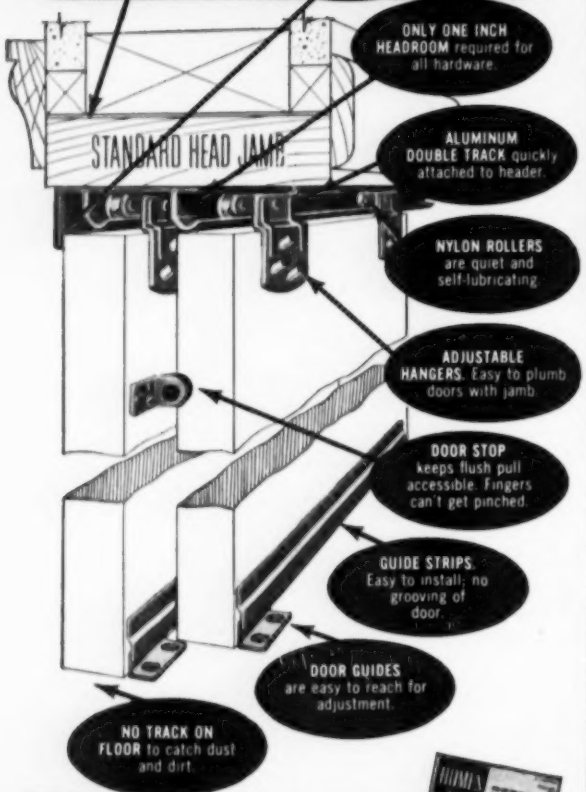

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This revolutionary new daylighting system lets you bring free daylight in from above through a simple framed, flat roof without monitor, saw tooth, or clerestory arrangements.

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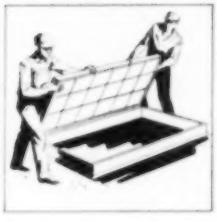

Kimble Toplite panels are factory-fabricated for uniform quality, and low installation cost. They are made up of an insulated aluminum grid into which special hollow glass units are set. The glass units themselves are 10⅞" square by 3" thick, and are installed in the aluminum grid 12" on centers. Panels are weatherproof with no porous materials exposed to the weather.

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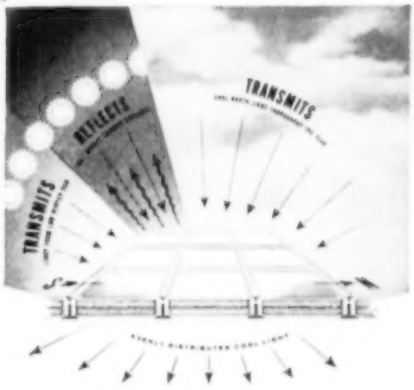
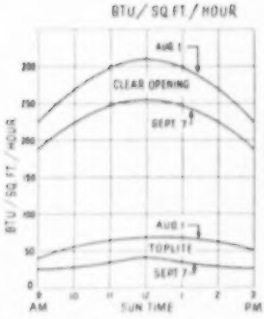


SELECTIVE CONTROL OF DAYLIGHT

Kimble Toplite Panels are selective in their light transmission. They transmit a high percentage of the light from the low winter sun and from the north sky but reflect much of the direct light from the high summer sun. Light-controlling characteristics eliminate glare and distribute daylight throughout the room so that concentrations of light are eliminated.



Calculated total heat gain through a Toplite Panel as compared to a clear opening in a horizontal roof for a building located at 37°N. Latitude.

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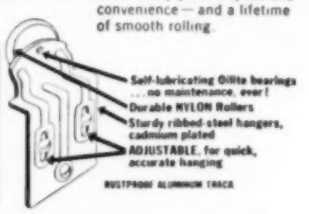
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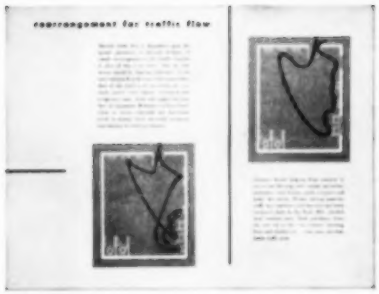
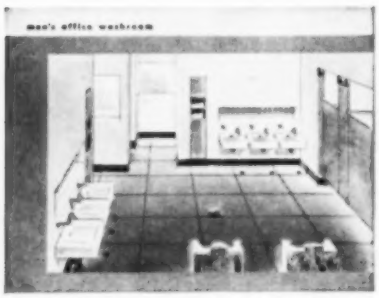
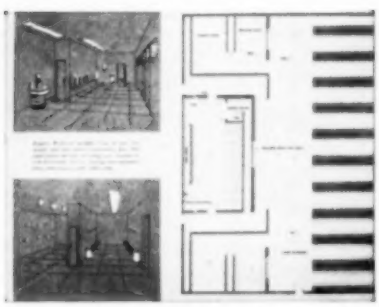


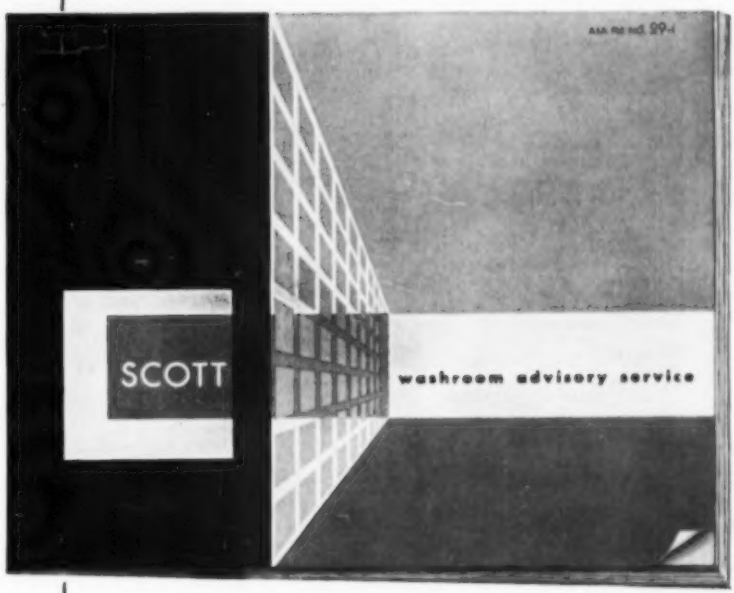
Traffic flow patterns. Proper placement of physical facilities for smooth traffic flow.



Men's office washroom. One of the many full-color illustrations of typical layouts.



Locker, shower and washroom plan. Typical layout of combination of personal service rooms.



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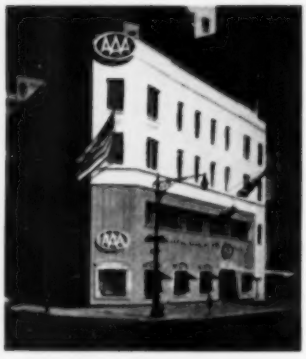

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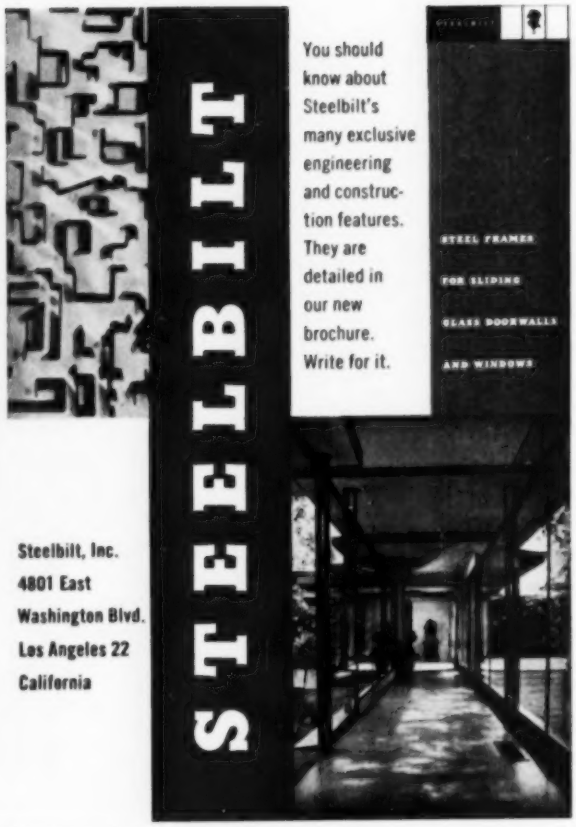
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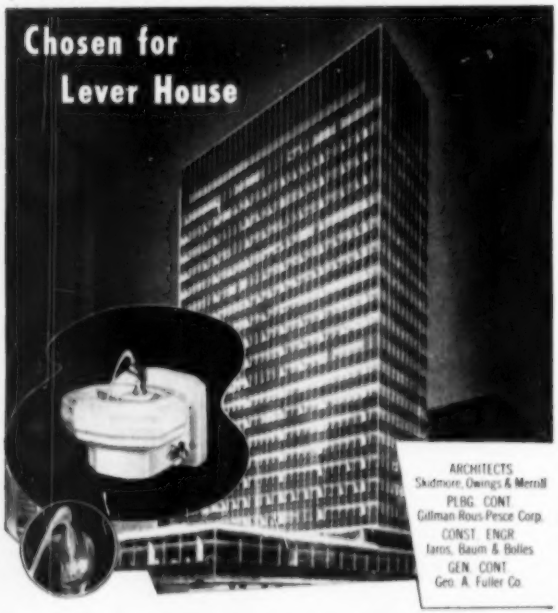

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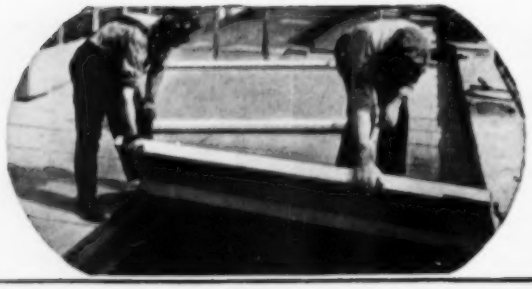

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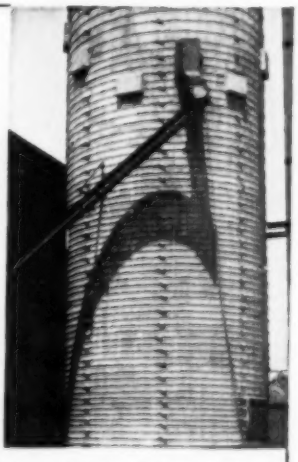

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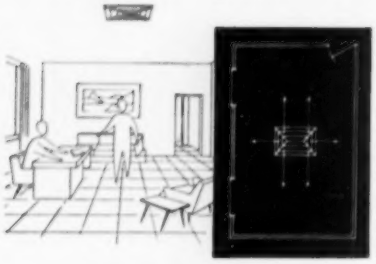

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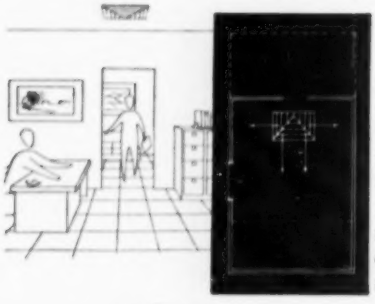

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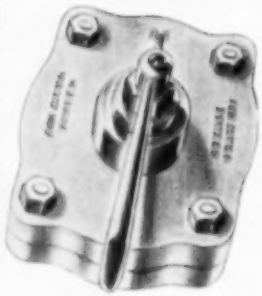

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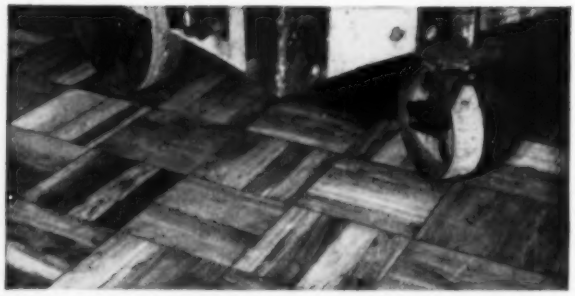

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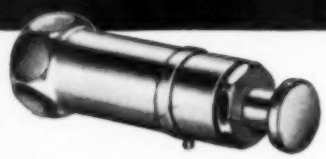

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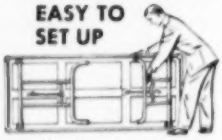

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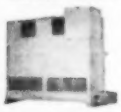

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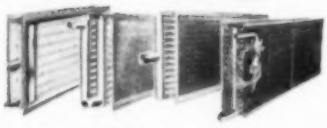

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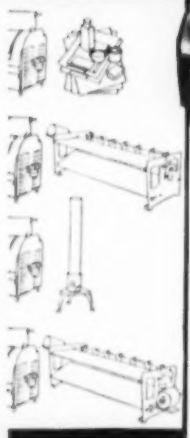

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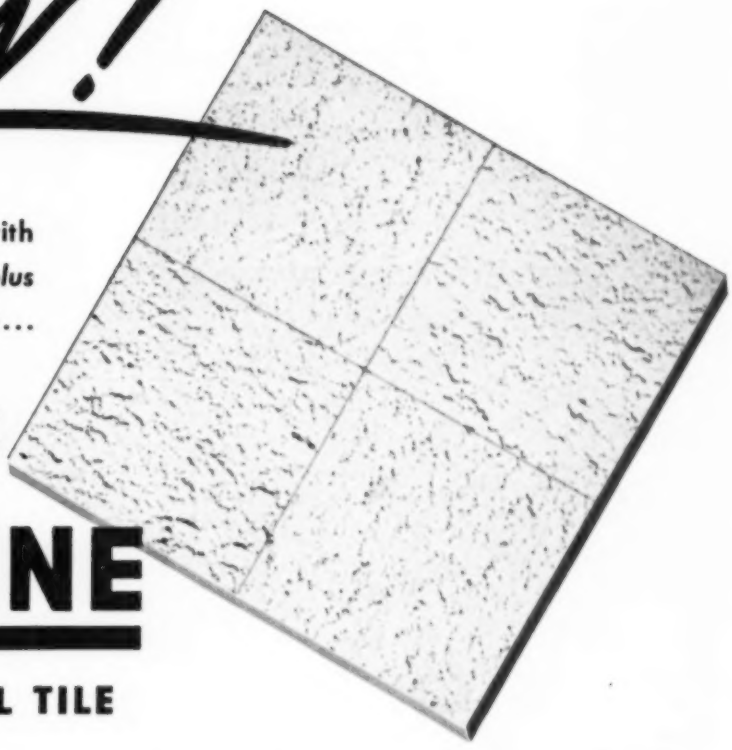

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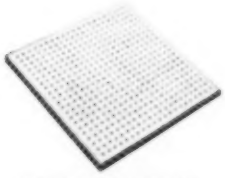

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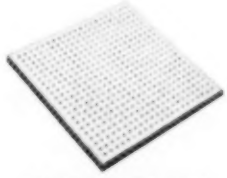

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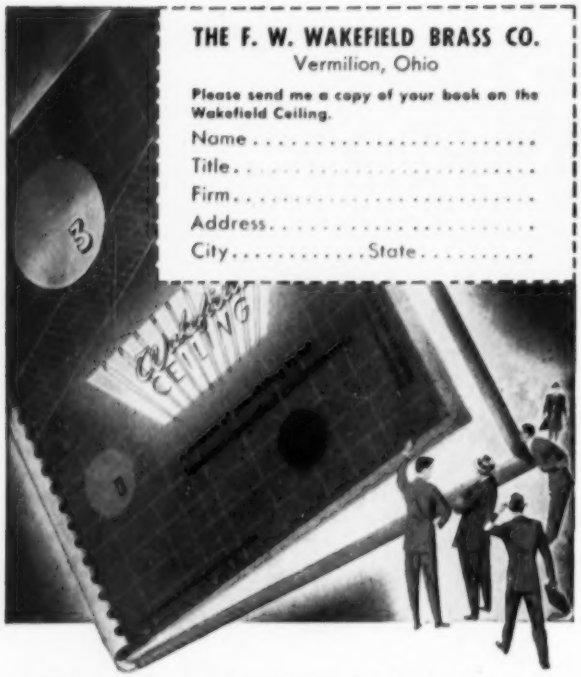

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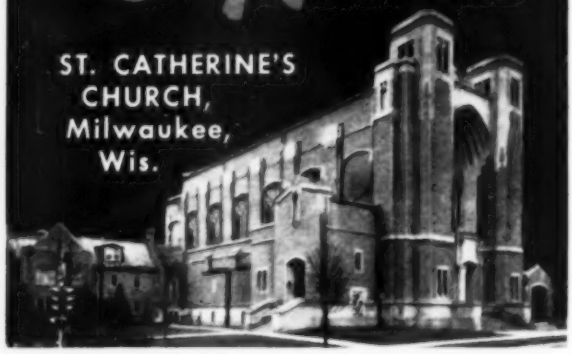

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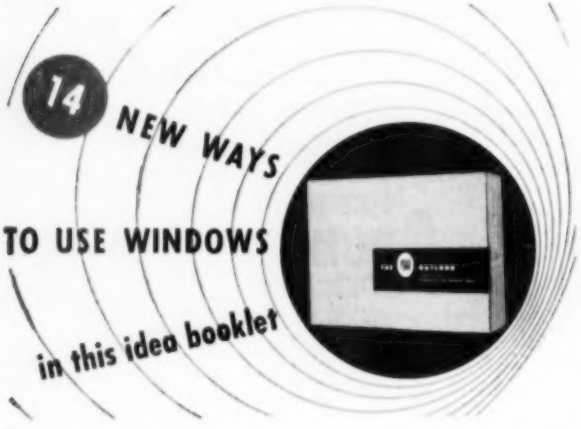

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P.S.

This is a vacation-month column, with very few words and a lot of space given to one of my own done-for-relaxation-because-they-take-your-mind-off-other-things water-colors. This is organic architecture in Bermuda, which is the only kind of architecture I felt was worth recording on that island.

I was very unfavorably impressed with the painted stucco, white-roofed buildings there, which I had been led to expect (perhaps from Adolph Treidler's much more competent but entirely dishonest water-colors) to be soft and to blend into the landscape. They don't; they are harsh and, to my mind, unpleasant in the bright sun. Even pastel pinks and blues and terra-cottas are obtrusive; one muted brown house that I saw against the gray-green hills looked restful and relaxed by comparison.

I was interested in this personal reaction, because it seems to be generally accepted that light colors and whites are appropriate to seaside and sun. I know of one architect who had a violent disagreement with an interior designer who altered his original concept of natural wood finishes in a house on one of the Caribbean islands. The architect had felt that soft, warm interior finishes would be a pleasant, restful relief from the constant glare of the hot sun; the interior designer persuaded the client that whites, reds, and primary blues were much more appropriate to the environment; and carefully selected, matched native woods were painted over. The result is not only a tragedy in the sense of misuse of materials, but also, the architect and I agree, is a misconception of what is appropriate.

Perhaps this is a matter of personal taste. I know there are plenty of people who go to the seashore wanting nothing but sun—sun glare and sun tan. I like it too, but I also like a muted, shaded little cave that I can retire to when the 9000 foot-candles of sunlight become overbearing. I think some of the designers of resort hotels are recognizing this need also.

•

Among distinguished visitors in New York recently was Sigfried Giedion, Swiss historian, teacher, and secretary of C.I.A.M. Some of you may have met him on the swing he took around the country, and profited from hearing his quiet, historical approach to the changes that he feels are due in contemporary design. A pleasant, sane contrast to the sledge-hammer criticism I wrote about in this column last month.

Giedion spoke, while he was here, of the responsibility the older leaders in the modern movement have to the younger generation coming along. His own appraisal and his own personal friendships stretch from such people as Van de Velde, who has just celebrated his 90th birthday, to students now in the schools. It makes one realize that this architectural movement of our time should be coming of age, when such a span of time between generations is presented in a historical perspective. There is a true existing background now for the work being done or about to be done.

Thomas H. Creighton

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